9-885-031-**37**

DVD Player/Stereo Video Cassette Recorder

HV-DH10E

OPERATING INSTRUCTIONS — En (English)

BEDIENUNGSANLEITUNG — D (Deutsch)

GEBRUIKSAANWIJZING — NL (Nederlands)

INSTRUCCIONES DE MANEJO — E (Español)

ISTRUZIONI PER L'USO — I (Italiano)

DVD VIDEO™

COMPACT disc DIGITAL VIDEO

VHS PAL

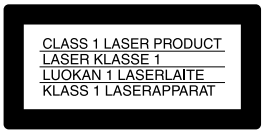
SHOWVIEW®

© 2003 Sony Corporation

Safety Precautions

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.
To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.
Mains lead must only be changed at a qualified service shop.



This appliance is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT MARKING is located on the rear exterior.

CAUTION

The use of optical instruments with this product will increase eye hazard. As the laser beam used in this DVD player/Video Cassette Recorder is harmful to eyes, do not attempt to disassemble the cabinet.
Refer servicing to qualified personnel only.

Precautions

Safety

- This unit operates on 200–240 V AC, 50 Hz. Check that the unit's operating voltage is identical with your local power supply.
- To prevent fire or shock hazard, do not place objects filled with liquids, such as vases, on the apparatus.
- The player is not disconnected from the AC power source (mains) as long as it is connected to the wall outlet, even if the player itself has been turned off.

Installing

- Do not install the unit in an inclined position. It is designed to be operated in a horizontal position only.
- Keep the unit and discs away from equipment with strong magnets, such as microwave ovens, or large loudspeakers.
- Do not place heavy objects on the unit.
- Do not place the unit on surfaces (rugs, blankets, etc.) or near materials (curtains, draperies) that may block the ventilation slots.

Caution

For use of the VCR

Television programs, films, video tapes and other materials may be copyrighted.
Unauthorized recording of such material may be contrary to the provisions of the copyright laws. Also, use of this recorder with cable television transmission may require authorization from the cable television transmitter and/or program owner.

For use of the DVD player

This product incorporates copyright protection technology that is protected by method claims of certain U.S. patents, other intellectual property rights owned by Macrovision Corporation, and other rights owners. Use of this copyright protection technology must be authorized by Macrovision Corporation, and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision Corporation. Reverse engineering or disassembly is prohibited.

SHOWVIEW®

ShowView is a registered trademarks of Gemstar Development Corporation. The ShowView system is manufactured under license from Gemstar Development Corporation.

Table of Contents

Introduction

Safety Precautions 2
WARNING 2
Caution 2
Before Use 4
About This Manual 4
Playable Discs 4
Precautions 6
Notes on Discs 6
Front Panel and Display Window 7
Rear Panel 8
Remote Control 9
Remote Control for DVD 9
Remote Control for VCR 10
Preparing the Remote Control 11

Preparation

Basic Connections 12
Connecting to a TV 12
Tuning in a Video Channel on Your TV 13
Additional Connections 14
Connecting to a Pay TV Satellite Receiver, Cable Box or Decoder 14
Connecting to an AV Receiver Equipped with a Digital Decoder 15
Connecting to an AV Receiver Equipped with a Dolby Pro Logic Decoder 16
Connecting to a Stereo System 17
Accessory Audio/Video (A/V) Connections to the Unit 17
Before Operation – VCR Part 18
Auto Set-up 18
How to Use the Main Menu 19
Setting the VCR Channels Manually 19
Changing the Order of TV Stations 21
Deleting TV Stations 22
How to Select Stored TV Stations 22
Setting the Clock Manually 23
Setting the Language 24
Using the Pay TV Decoder 24
Before Operation – DVD Part 25
General Explanation 25
On-Screen Display 25
Initial Settings 26

Operation

Operation with Tape 32
Playing a Tape 32
One-Touch Recording (OTR) 33
ShowView Programming 34
Timer Recording Using On Screen Display 36
Copying from DVD to VCR 38
Recording from another Video Recorder 38
On Screen Display 39
Turning On/Off the On Screen Display 39
Child Lock 39
REC. End Search 40
Playing at Various Speeds 40
Hi-Fi Stereo Sound System 41
To Set the Color System 42
Wide Screen Compatibility 16:9 42
Operation with DVD and Video CD 43
Playing Discs 43
General Features 44
- *Moving to another TITLE* 44
- *Moving to another CHAPTER/TRACK* 44
- *Slow Motion* 44
- *Still Picture and Frame-by-frame Playback* 45
- *Search* 45
- *Random* 45
- *Repeat* 45
- *Repeat A-B* 45
- *Time Search* 46
- *3D Surround* 46
- *Changing the Audio Track* 46
- *Zoom* 46
- *Marker Search* 47

Special DVD Features 47
- *Camera Angle* 47
- *Changing the Audio Language* 47
- *Subtitles* 47
- *Child Lock* 47

Operation with Audio CD and MP3 Discs 48
Notes on MP3 Discs 49
Programmed Playback 50
Operation with DATA-CD containing JPEG files 51
Displaying JPEGs 51
Playback of JPEG images 51

Reference

Troubleshooting 52
Country Code List 54
Language Code List 56
Specifications 57

Before Use

About This Manual

Most operations of the unit can be accomplished with the remote control. Operations which must be accomplished with controls on the front panel of the unit are also explained.
The meaning of the icon used in this manual is described below:

Icon	Meaning
DVD	Functions available for DVD VIDEOs, DVD-R/RWs or DVD+RWs in video mode
VCD1.1	Functions available for VIDEO CDs without PBC (playback control) function
VCD2.0	Functions available for VIDEO CDs with PBC (playback control) function
DATA-CD	Functions available for DATA CDs (CD-ROMs/CD-Rs/CD-RWs containing MP3* audio tracks and JPEG files)
CD	Functions available for music CDs or CD-Rs/CD-RWs in music CD format
⚠	Indicates hazards that could harm the unit itself or other material damage.
Note(s)	Indicates special operating features of the unit.
Tip(s)	Indicates tips and hints for making the task easier.

* MP3 (MPEG 1 Audio Layer 3) is a standard format defined by ISO/MPEG which compresses audio data.

Playable Discs

DVD VIDEO	DVD (8 cm/12 cm disc)
COMPACT disc DIGITAL VIDEO	Video CD (8 cm/12 cm disc)
COMPACT disc DIGITAL AUDIO	Audio CD (8 cm/12 cm disc)

In addition, this unit can play a CD-R or CD-RW that contains audio titles or MP3 files.

Notes

The unit cannot play the following discs:

- All CD-ROMs/CD-Rs/CD-RWs other than those recorded in the following formats:
  - music CD format
  - video CD format
  - MP3 format that conforms to ISO9660* Level 1/Level 2, or its extended format, Joliet
  - JPEG format that conforms to ISO9660* Level 1/Level 2, or its extended format, Joliet
- Data part of CD-Extras
- DVD-R/RWs, DVD+RWs in VR mode
- DVD-ROMs
- DVD Audio discs
- HD layer on Super Audio CDs

* A logical format of files and folders on CD-ROMs, defined by ISO (International Standard Organization).

Also, the unit cannot play the following discs:

- A DVD with a different region code.
- A disc that has a non-standard shape (e.g., card, heart).
- A disc with paper or stickers on it.
- A disc that has the adhesive of cellophane tape or a sticker still left on it.

Some CD-R/RWs, DVD-R/RWs or DVD+RWs (in video mode) cannot be played on this unit due to the recording quality or physical condition of the disc, or the characteristics of the recording device.
Furthermore, the disc will not play if it has not been correctly finalized. For more information, see operating instructions for the recording device. Note that discs created in the Packet Write format cannot be played.

Music discs encoded with copyright protection technologies

This product is designed to playback discs that conform to the Compact Disc (CD) standard.
Recently, various music discs encoded with copyright protection technologies are marketed by some record companies. Please be aware that among those discs, there are some that do not conform to the CD standard and may not be playable by this product.

Notes on DVDs
Some playback operations of DVDs may be intentionally fixed by software manufacturers. As this unit plays DVDs according to disc content designed by the software manufacturer, some playback features of the unit may not be available or other functions may be added.
Refer also to the instructions supplied with the DVDs. Some DVDs made for business purposes may not be played on the unit.

Regional code of the unit and DVDs

This unit is designed and manufactured for playback of Region 2 encoded DVD software. The region code on the labels of some DVD discs indicates which type of the unit can play those discs. This unit can play only DVD discs labeled 2 or ALL. If you try to play any other discs, the message “Check Regional Code” will appear on the TV screen. Some DVD discs may not have a region code label even though their playback is prohibited by area limits.

Note on DTS-encoded CDs
When playing DTS-encoded CDs, excessive noise may be exhibited from the analog stereo output. To avoid possible damage to the audio system, turn down the volume before playing back such discs, adjust the volume gradually, and keep the volume level low. To enjoy DTS Digital Surround™ playback, an external 5.1 channel DTS Digital Surround™ decoder system must be connected to the digital output of the unit.

NOTES ON COPYRIGHTS
It is forbidden by law to copy, broadcast, show, broadcast via cable, play in public, or rent copyrighted material without permission.
This product features the copy protection function developed by Macrovision. Copy protection signals are recorded on some discs. When recording and playing the pictures of these discs on a VCR, picture noise will appear.
This product incorporates copyright protection technology that is protected by method claims of certain U.S. patents and other intellectual property rights owned by Macrovision Corporation and other rights owners. Use of this copyright protection technology must be authorized by Macrovision Corporation, and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision Corporation. Reverse engineering or disassembly is prohibited.

Disc-related Terms

Title (DVD only)
The main film content or accompanying feature content or music album.
Each title is assigned a title reference number enabling you to locate it easily.

Chapter (DVD only)
Sections of a picture or a musical piece that are smaller than titles. A title is composed of one or several chapters. Each chapter is assigned a chapter number to enable you to locate the chapter you want. Depending on the disc, chapters may not be labelled.

Track (audio CD only)
Sections of a musical piece on an audio CD. Each track is assigned a track number, enabling you to locate the track you want.

Types of Video CDs

There are two types of video CDs:

Video CDs equipped with PBC (Version 2.0)
PBC (Playback control) functions allow you to interact with the system via menus, search functions, or other typical computer-like operations. Moreover, still pictures of high resolution can be played if they are included in the disc.

Video CDs not equipped with PBC (Version 1.1)
Operated in the same way as audio CDs, these discs allow playback of video pictures as well as sound, but they are not equipped with PBC.

Precautions

Handling the Unit

When shipping the unit

The original shipping carton and packing materials come in handy. For maximum protection, re-pack the unit as it was originally packaged at the factory.

When setting up the unit

The picture and sound of a nearby TV, VCR, or radio may be distorted during playback. In this case, position the unit away from the TV, VCR, or radio, or turn off the unit after removing the disc.

To keep the surface clean

Do not use volatile liquids, such as insecticide spray, near the unit. Do not leave rubber or plastic products in contact with the unit for a long period of time. They will leave marks on the surface.

Cleaning the Unit

To clean the cabinet

Use a soft, dry cloth. If the surfaces are extremely dirty, use a soft cloth lightly moistened with a mild detergent solution. Do not use strong solvents such as alcohol, benzine, or thinner, as these might damage the surface of the unit.

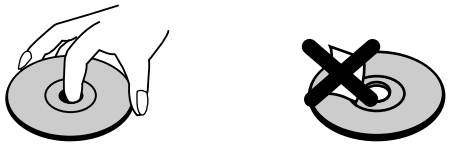
To obtain a clear picture

This unit is a high-tech, precision device. If the optical pick-up lens and disc drive parts are dirty or worn, the picture quality will be poor.
Regular inspection and maintenance are recommended after every 1,000 hours of use. (This depends on the operating environment.)
For details, please contact your nearest dealer.

Notes on Discs

Handling Discs

Do not touch the playback side of the disc.
Hold the disc by the edges so that fingerprints will not get on the surface.
Do not stick paper or tape on the disc.

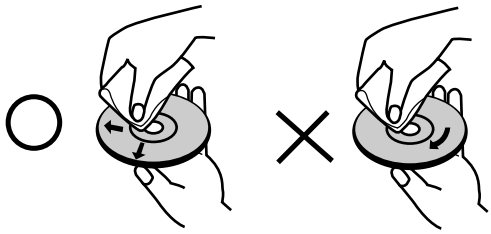


Storing Discs

After playing, store the disc in its case.
Do not expose the disc to direct sunlight or sources of heat, or leave it in a parked car exposed to direct sunlight, as there may be a considerable temperature increase inside the car.

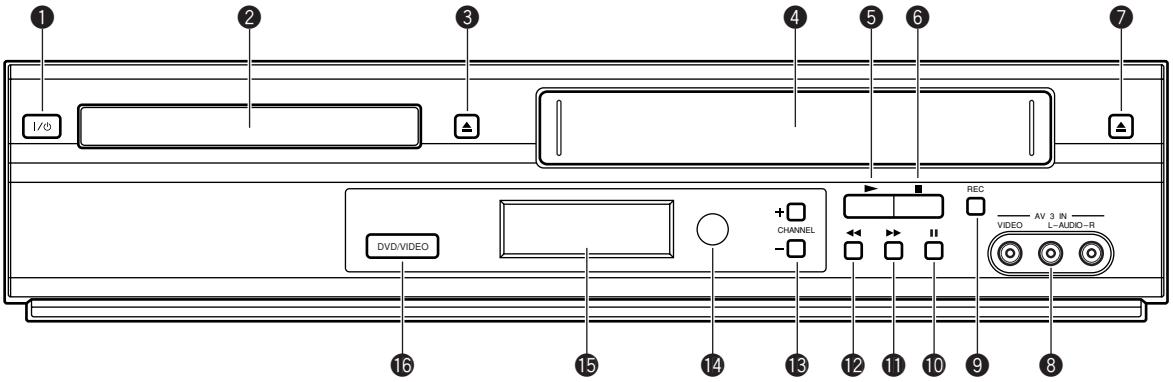
Cleaning Discs

Fingerprints and dust on the disc can cause poor picture quality and sound distortion. Before playing, clean the disc with a clean cloth. Wipe the disc from the center outward.

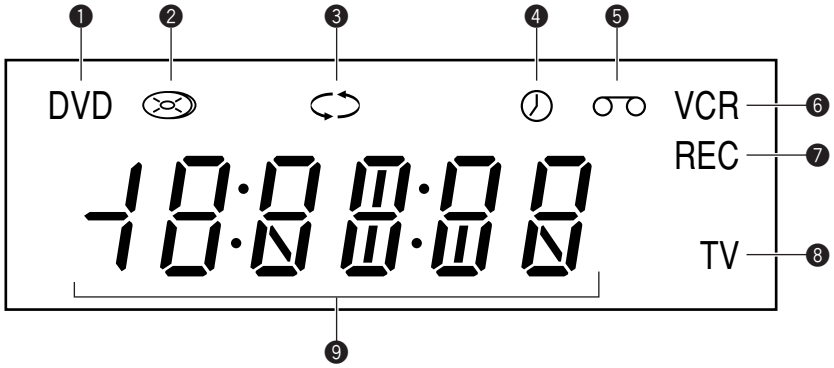


Do not use strong solvents such as alcohol, benzine, thinner, commercially available cleaners, or anti-static spray intended for older vinyl records.

Front Panel and Display Window

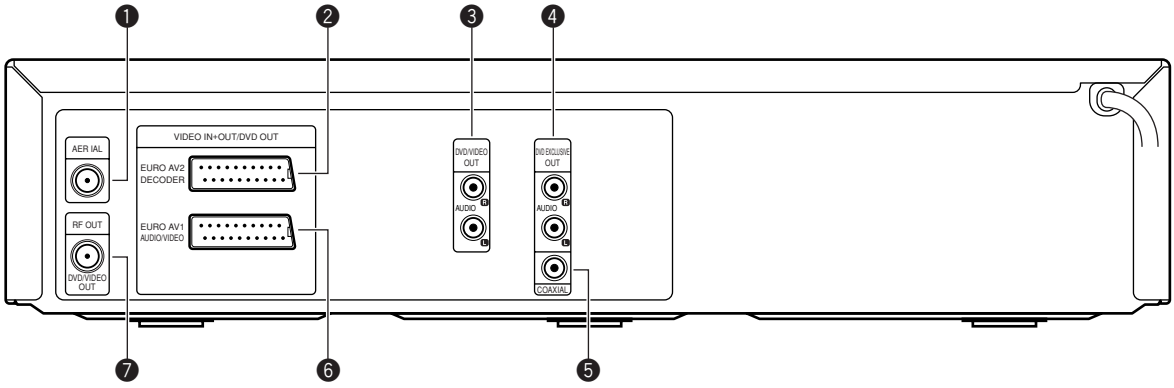


❶ I/⏻ (POWER) switch
❷ Disc Tray (DVD deck)
❸ ⏏ (OPEN/CLOSE) button
❹ Cassette Compartment (VCR deck)
❺ ► (PLAY) button
❻ ■ (STOP) button
❼ ⏏ (EJECT) button
❽ AV 3 IN (VIDEO / L-AUDIO-R)
❾ REC button
❿ ❙❙ (PAUSE) button
⓫ ►► (fast-forward) button
⓬ ◄◄ (rewind) button
⓭ CHANNEL +/– buttons
⓮ Remote Sensor
⓯ Display window
⓰ DVD/VIDEO select button



❶ DVD indicator
❷ Disc indicator
❸ Repeat indicator
❹ TIMER indicator
❺ Tape indicator
❻ VCR indicator
❼ REC indicator
❽ TV indicator
❾ Total playing time/elapsed time/remaining time/ current deck status indicator

Rear Panel

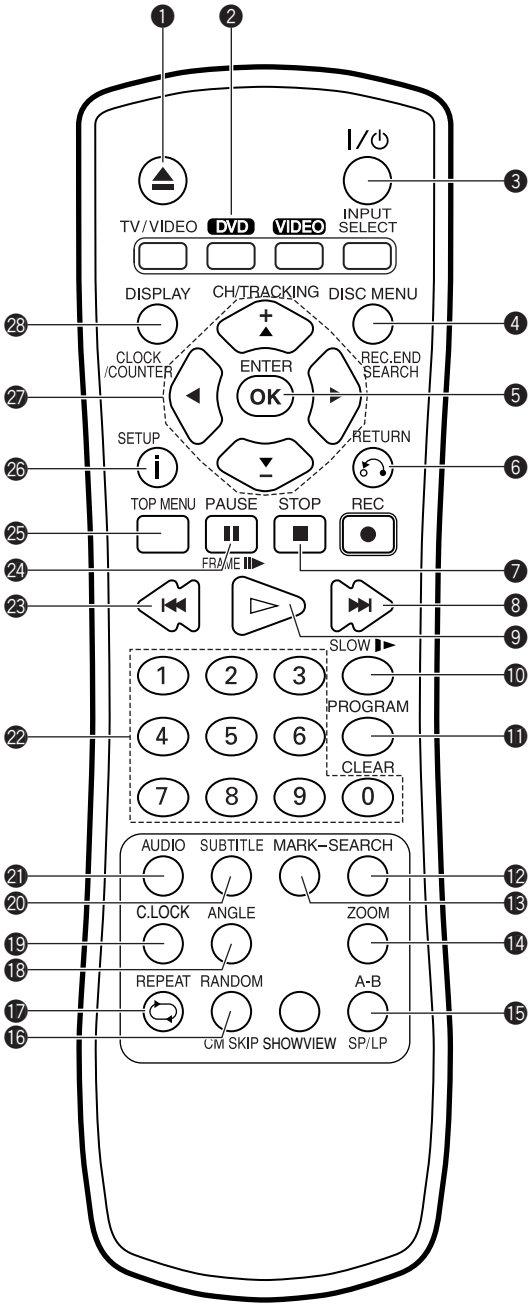


❶ AERIAL (antenna) input jack
❷ EURO AV2 DECODER jack
❸ DVD/VIDEO OUT (AUDIO L/R) jacks
❹ DVD EXCLUSIVE OUT (AUDIO L/R) jacks
❺ COAXIAL audio output jack (DVD EXCLUSIVE OUT)
❻ EURO AV1 AUDIO/VIDEO (VIDEO IN+OUT/DVD OUT) jack
❼ RF OUT (DVD/VIDEO OUT) jack

⚠

Do not touch the inner pins of the jacks on the rear panel. Electrostatic discharge may cause permanent damage to the unit.

Remote Control



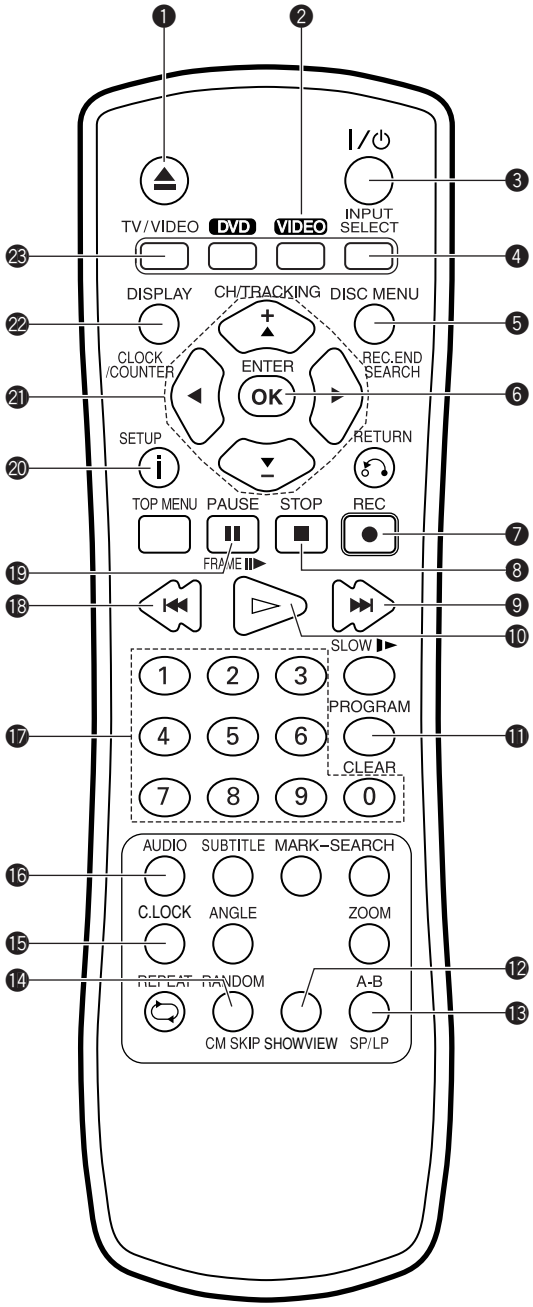
Remote Control for DVD

Things to know before starting

➤ *This remote control uses the same buttons for VCR and DVD functions (ex. ▷ (PLAY)).*
When using a DVD, first press the DVD button.

❶ ≜ (OPEN/CLOSE) button
❷ DVD select button
❸ I/⏻ (POWER) button
❹ DISC MENU button
❺ OK/ENTER button
❻ ↶RETURN button
❼ ■STOP button
❽ ▶▶I (SLOWI▶) button
❾ ▷ (PLAY) button
❿ PROGRAM button
⓫ CLEAR button
⓬ SEARCH button
⓭ MARK button
⓮ ZOOM button
⓯ A-B repeat button
⓰ RANDOM button
⓱ ⮌REPEAT button
⓲ ANGLE button
⓳ C.LOCK button
⓴ SUBTITLE button
㉑ AUDIO button
㉒ Numeric buttons (0–9)
㉓ I◀◀ button
㉔ IIPAUSE button
㉕ TOP MENU button
㉖ ⓘ/SETUP button
㉗ ◀/▶/▲+/▼– (left/right/up/down) buttons
㉘ DISPLAY button

En



Remote Control for VCR

Things to know before starting

➤ *This remote control uses the same buttons for VCR and DVD functions (ex. ▷ (PLAY)).*
When using a VCR, first press the VIDEO button.

❶ **▲ (EJECT) button**
❷ **VIDEO select button**
❸ **I/⏻ (POWER) button**
❹ **INPUT SELECT button**
❺ **REC. END SEARCH button**
❻ **OK/ENTER button**
❼ **●REC button**
❽ **■STOP button**
❾ **▶▶I (SLOWI▶)button**
❿ **▷ (PLAY) button**
⓫ **CLEAR button**
⓬ **SHOWVIEW button**
⓭ **SP/LP button**
⓮ **CM SKIP button**
⓯ **C.LOCK button**
⓰ **AUDIO button**
⓱ **Numeric buttons (0–9)**
⓲ **I◀◀ button**
⓳ **IIPAUSE/FRAMEII▶ button**
⓴ **ⓘ/SETUP button**
㉑ **CH/TRACKING ▲+/▼–, ◀/▶ (left/right) buttons**
㉒ **CLOCK/COUNTER button**
㉓ **TV/VIDEO button**

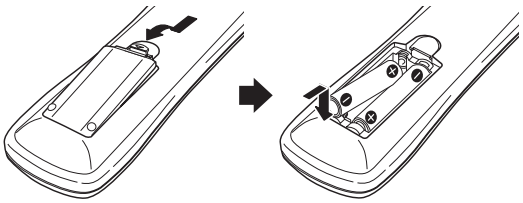
Preparing the Remote Control

Inserting the Batteries

⚠

To prevent damage from leakage or explosion, follow the descriptions below.

- **Insert two R03 (size AAA) batteries (supplied) with the ⊕ and ⊖ marks correctly as illustrated.**
- **Do not mix old batteries with new ones or different types of batteries.**
- **Do not throw the batteries into a fire, apply heat to them or take them apart.**
- **Do not carry the batteries with keys or other metallic objects.**

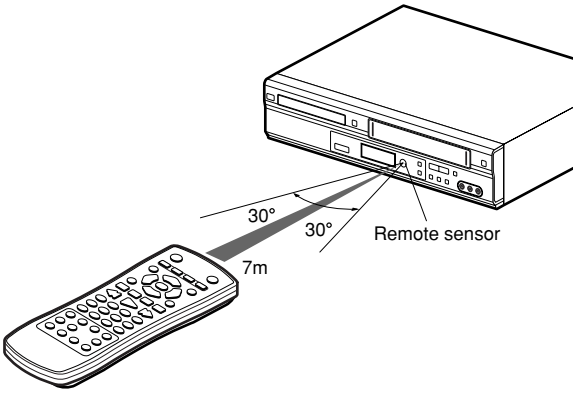


Note

Remove the batteries when they have no more power, or when you do not use the remote control for a long period of time.

Using the Remote Control

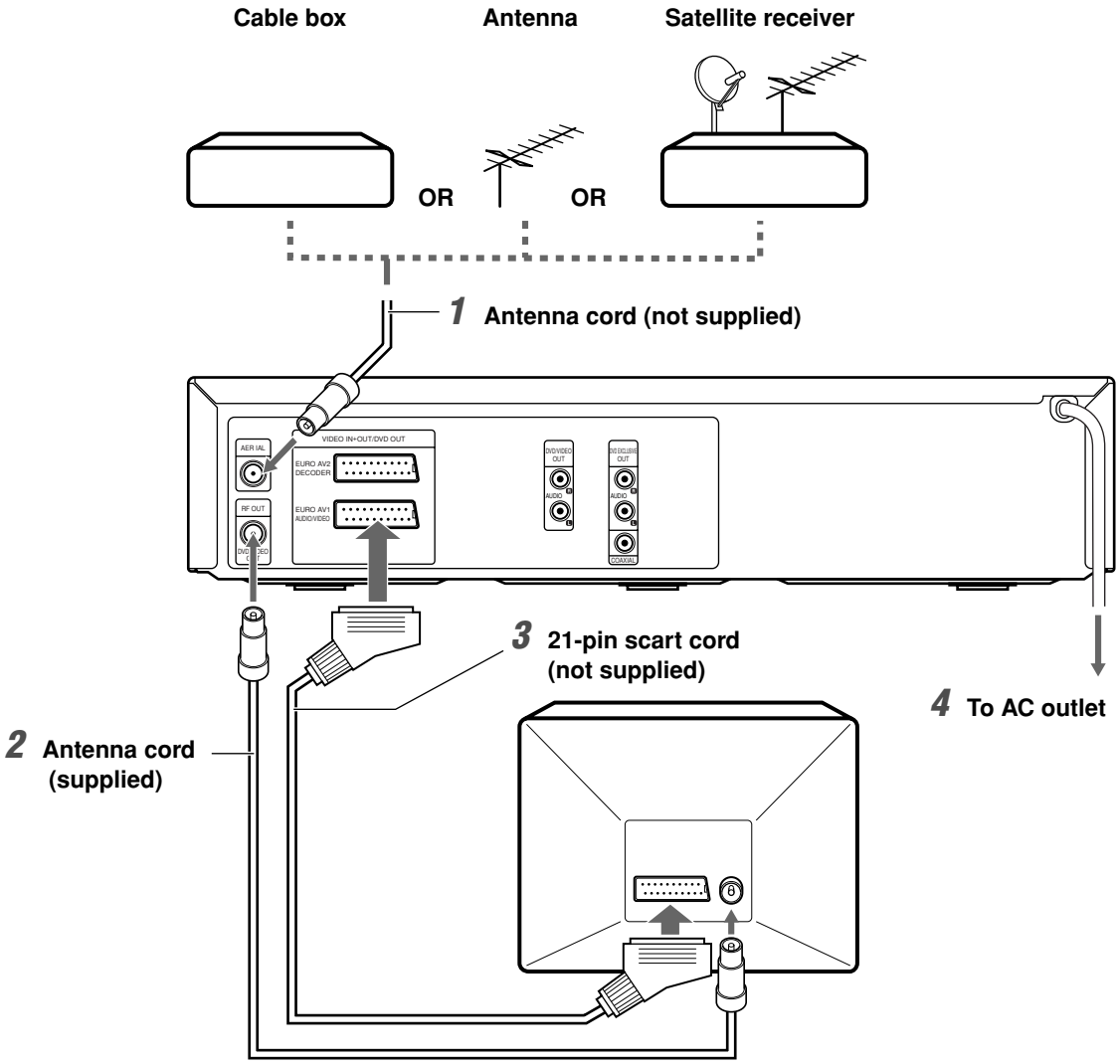
Point the remote control toward the remote sensor.



Notes

- The remote control may not operate when there is any obstruction between the remote control and the remote sensor.
- Strong ambient light sources such as a fluorescent lamp or direct sunlight may cause unreliable operation.
- Using a TV with the same type of infrared remote control facing the same direction may cause incorrect operation.
- The maximum distance for effective control between the remote control and the remote sensor is 7 meters.
- Although you can use the remote control within an angle of up to 30 degrees in any direction from directly in front of the remote sensor, we recommend a narrower angle for stable operation.

Basic Connections



Connecting to a TV

1. Disconnect the antenna cord from your TV and connect it to the AERIAL jack on this unit.
2. Connect the supplied antenna cord to the RF. OUT (DVD/VIDEO OUT) jack on this unit and the aerial jack on your TV.
3. Connect the optional 21-pin scart cord to the EURO AV1 AUDIO/VIDEO jack on this unit and the 21-pin scart jack on your TV.
4. Connect the AC power cord to the AC outlet.

Notes

- All connections should be made with both the unit and your TV unplugged from the AC outlet.
- If your TV has more than one 21-pin scart jack, please refer to the TV operation instructions.
- If you do not have a house hold antenna jack or you are uncertain of it, you should seek the advice of a local antenna dealer.

When connecting to a wide screen TV
This unit can playback a DVD and video cassette tape recorded with (16:9) wide screen format.To change the settings, see “TV Aspect” on page 27 and “Wide Screen Compatibility 16:9” on page 42.

Tuning in a Video Channel on Your TV

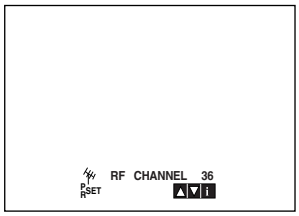
When using the unit, the signals passes from the antenna to the unit and then out to the TV. Before you use this unit, a video output channel must be set on your TV.

If you have connected the unit to the TV with a 21-pin scart cord, this procedure is not necessary.

1. Press I/⏻ on the remote control to turn on the unit. Make sure your TV is turned on.
2. Press VIDEO on the remote control to switch out to the VCR.
3. Select a spare channel position on the TV and tune the TV so that the blue screen appears clearly on the TV screen.
   - Refer to the TV operating instructions for tuning.
   - Whenever you want to play back a tape, select this channel position.

If there is interference on the picture (wavyline, picture roll, etc.)

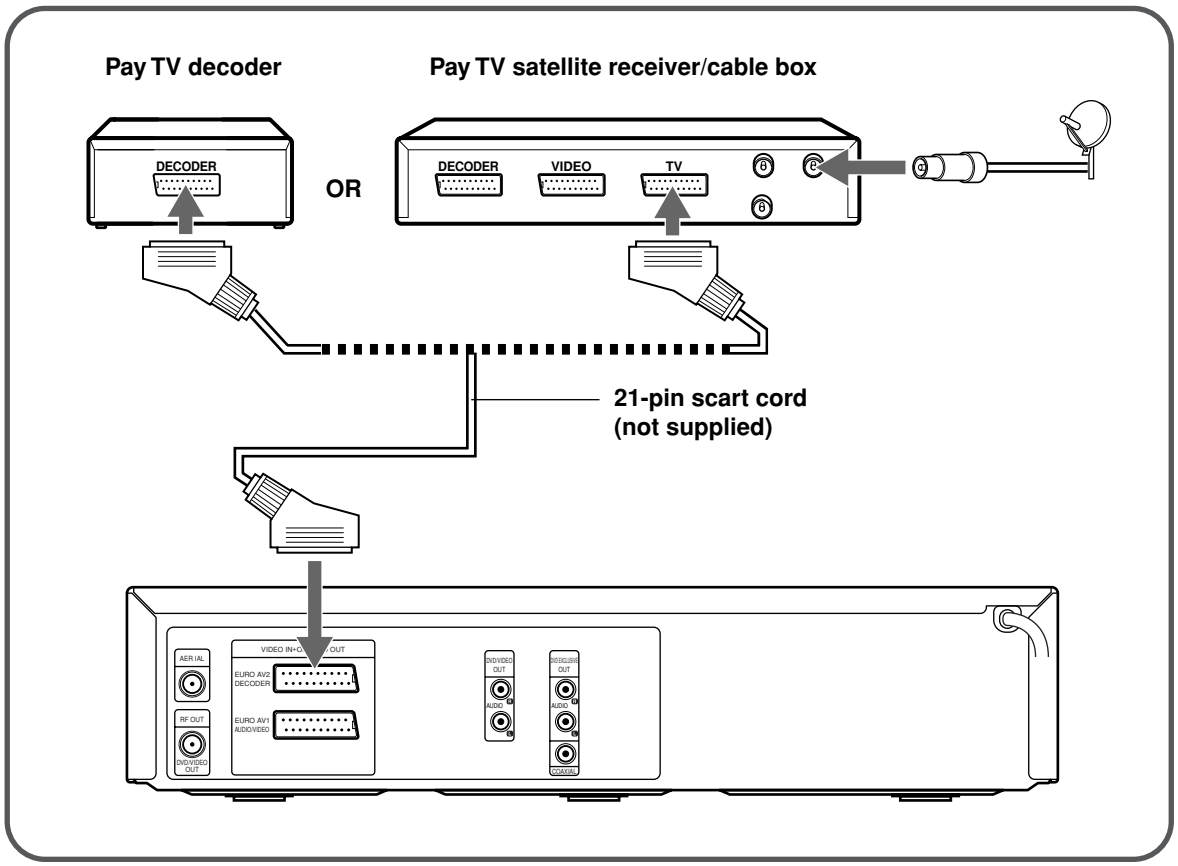
1. During power off, press and hold CHANNEL + or – on the front panel for more than 4 seconds. “RF 36” appears on the display window, and the following picture will be displayed on the TV screen.



2. Press CHANNEL + or – to select another channel.
   - You can select any number between 22 and 68.
3. Tune the TV so that the RF CHANNEL screen appears clearly on the TV screen.
   - Refer to the TV operating instructions for tuning the TV picture.
4. Press I/⏻ to turn off the unit. The unit is now tuned to your TV.
   - Whenever you want to play back a tape, select this channel position.

If there is still interference on the TV screen
Connect the unit to the TV with an optional 21-pin scart cord.
Whenever you want to play back a tape, simply select a channel on your TV called AV or AUX.
You can set RF out to OFF in step 2.

Additional Connections



Connecting to a Pay TV Satellite Receiver, Cable Box or Decoder

Connect the optional 21-pin scart cord to the EURO AV2 DECODER jack on this unit and the 21-pin scart jack on your Pay TV satellite receiver, cable box or decoder.

Notes

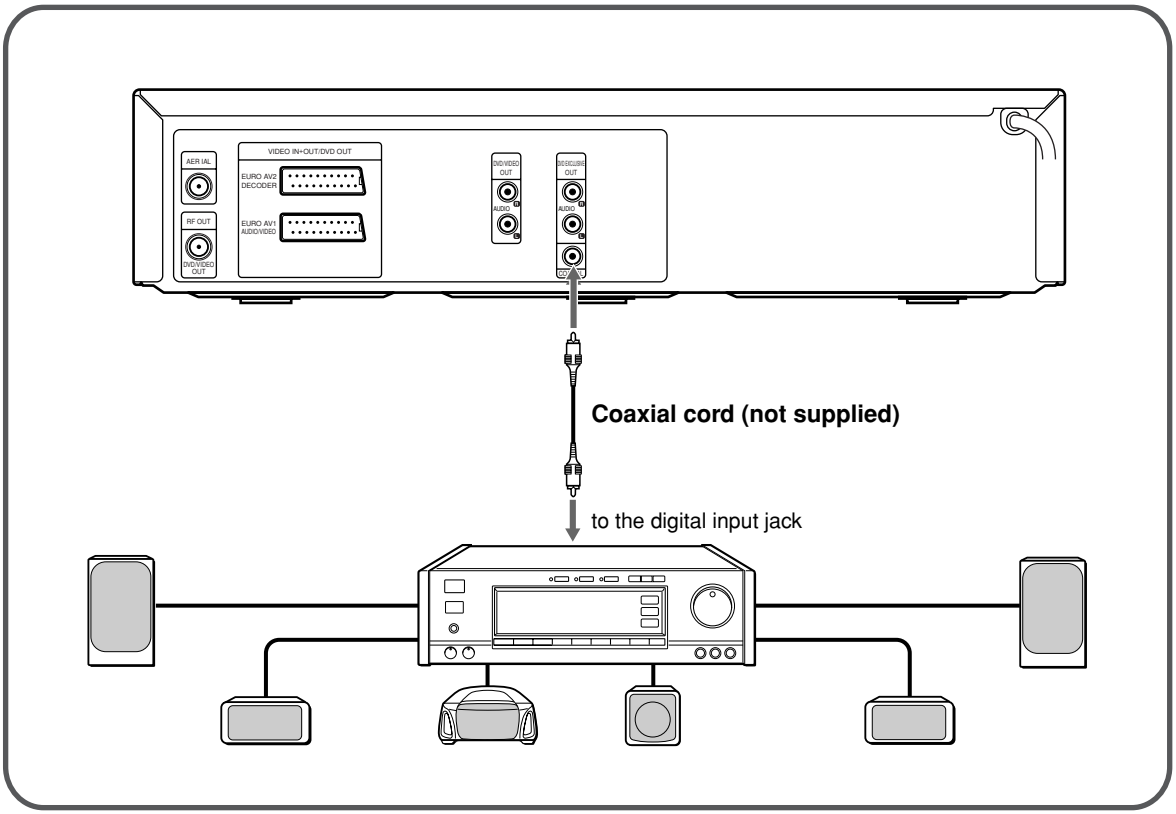
- If your satellite receiver or cable box has more than two scart jacks, use the TV jack to connect to this unit and not the VIDEO jack. Otherwise you may not receive a proper picture.
- If you connect this unit to a cable box or satellite receiver, please refer to the operating instruction of those appliances.

Set the Main menu correctly after connecting

Set the DECODER in the Main menu to ON (see “Using the Pay TV Decoder” on page 24).

Additional Connections (Continued)

If your AV receiver is equipped with a Dolby Digital or DTS decoder, you can enjoy high-quality audio playback.



Connecting to an AV Receiver Equipped with a Digital Decoder

Connect the COAXIAL audio output jack on this unit to the corresponding in jack on your AV receiver.

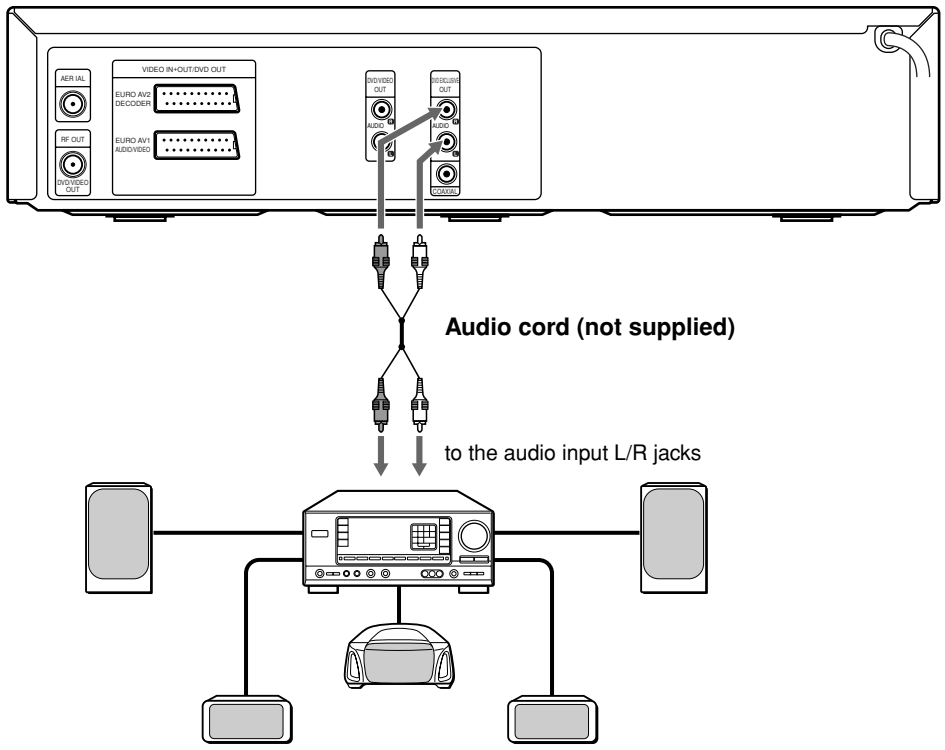
Set the setup menu correctly after connecting
Some AV receivers have digital decoders that use the bitstream signal directly from Dolby Digital or DTS inputs. If your AV receiver has a digital decoder for Dolby Digital or DTS inputs, set the output signal from your unit to DOLBY DIGITAL/PCM or Stream/PCM for that input. Otherwise, set the output to PCM (see "Initial Settings" on page 28 for details).

⚠

DO NOT select DOLBY DIGITAL/PCM or Stream/PCM for the Digital Audio Output setting in the setup menu when connecting to an AV receiver not equipped with a Dolby Digital or DTS decoder (with a coaxial connecting cord).
Merely attempting to play a disc may cause a screeching noise that could be harmful to your ears and damage the speakers. Be sure to select PCM for the Digital Audio Output setting.

- Manufactured under license from Dolby Laboratories. "Dolby", "Pro Logic" and the double-D symbol are trademarks of Dolby Laboratories. Confidential unpublished works. ©1992-1999 Dolby Laboratories. All rights reserved.
- "DTS" and "DTS Digital Out" are trademarks of Digital Theater Systems, Inc.

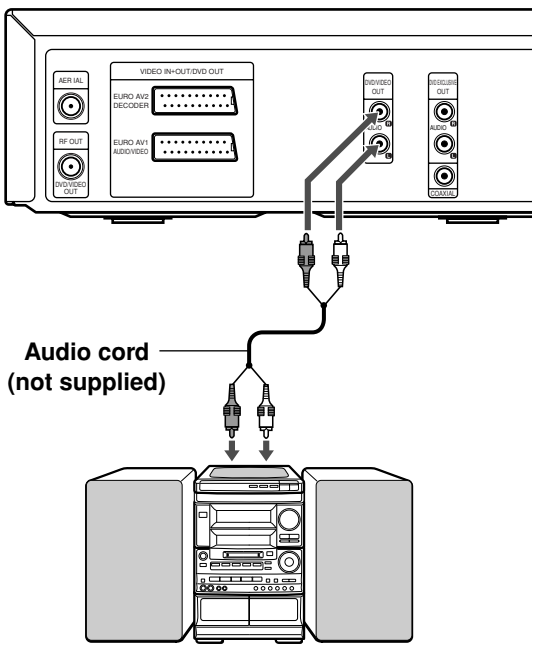
Additional Connections (Continued)



Connecting to an AV Receiver Equipped with a Dolby Pro Logic Decoder

Connect the Left and Right DVD EXCLUSIVE OUT AUDIO jacks on this unit to the audio left/right in jacks on your AV receiver.

Additional Connections (Continued)

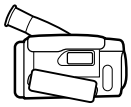


Stereo system

Connecting to a Stereo System

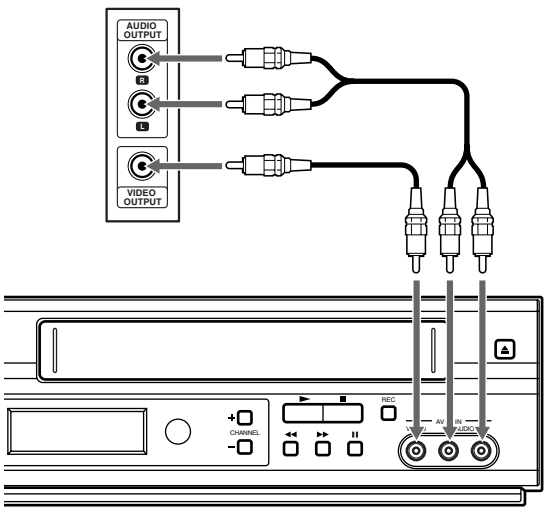
Connect the optional audio cord to the DVD/VIDEO OUT (AUDIO L/R) jacks on this unit and the audio input jacks on your stereo system.

You can connect your video camera or other video accessories by following the instructions below.



Accessory Component: VCR, Camcorder, Video Camera, Satellite Receiver, Laser Disc Player

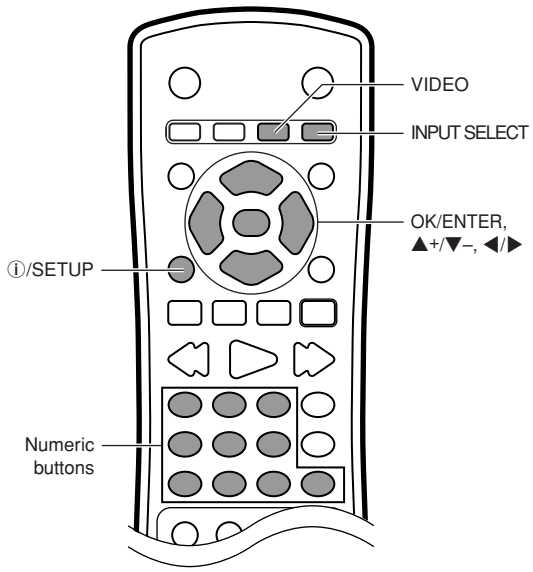
Jack panel of Accessory



Front of the unit

Accessory Audio/Video (A/V) Connections to the Unit

Connect the AV 3 IN jacks on the unit to the audio/ video out jacks on your accessory component, using optional audio/video cords.

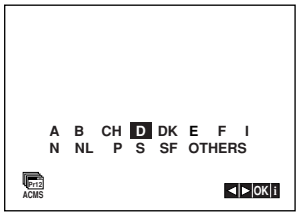


Preparation:

- Turn on the TV and set the TV for the unit's reception.
- When the unit and TV are connected with a 21-pin scart cord, set the TV to the AV mode.
- When they are connected with only the antenna cord, set the TV to the video output channel.

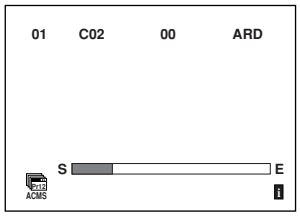
Auto Set-up

The Auto set-up function can search and tune all available TV station and assign them in the unit, then set the correct time automatically.
The following picture will display on the TV screen when you have just connected the unit for the very first time.

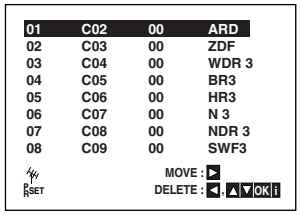


1 Select the country according to your area with ◀ and ▶.
A: Austria, **B:** Belgium, **CH:** Switzerland, **D:** Germany, **DK:** Denmark, **E:** Spain, **F:** France, **I:** Italy, **N:** Norway, **NL:** Netherlands, **P:** Portugal, **S:** Sweden, **SF:** Finland, **OTHERS:** Others

2 Press OK/ENTER to start the automatic storing of the channels of the TV stations in your area. A scan bar appears on the TV screen.



In about ten minutes, after the unit has finished setting the VCR channels and time, a list of channels appears on the screen.



The name of the TV station is displayed if the broadcast has PDC/VPS information.

- When the unit receives a signal with PDC information, it sets the month, day, time and VCR channels. Set the year manually. See page 23.
- When the unit receives a signal with VPS information, it sets the time and VCR channels. Set the year, month and day manually. See page 23.

3 Press ⓘ/SETUP to return to the normal screen.

If the desired TV stations could not be set
Set the VCR channels manually. See page 19. (Setting the VCR channels is necessary for recording TV programs.)

If the clock could not be set
If the reception signal is weak, "—:—" appears on the display window. Set the clock manually. See page 23.
If the PDC/VPS signal is weak, the clock may not be able set with Auto set-up. In this case, set the clock manually.

Tip

To re-start Auto set-up, press ⓘ/SETUP. And press ◀/▶ to select ACMS, then press OK/ENTER. Press ◀/▶ to select the letter of your country, then press OK/ENTER to start Auto set-up.

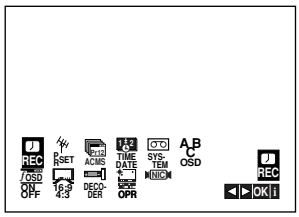
Notes

- Even if the power supply is interrupted, the unit will automatically receive the preset channels and set the clock when the power is restored once you have completed Auto set-up.
  This function does not operate if the TV station is not broadcasting when the power is restored.
- The unit automatically adjusts the clock for Daylight Saving Time once you completed Auto set-up.
- Once you conduct Auto set-up, the previous settings will be canceled.

How to Use the Main Menu

This unit can easily be programmed by using the menus displayed on screen.
The menus are controlled from the remote control.

1. Press VIDEO to switch out to the VCR.
2. Press ⓘ/SETUP and the main menu will appear.



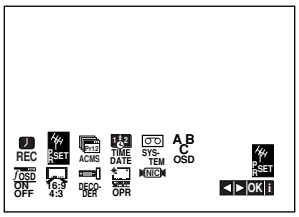
REC: Timer recording setting (see p. 36).
PR SET: Manual tuning setting (see p. 19).
ACMS: ACMS (Automatic Channel Memory System) (see p. 18).
TIME DATE: Date & clock setting (see p. 23).
SYSTEM: To set the Color TV System (see p. 42).
ABC OSD: To change the language setting for OSD (see p. 24).
f.OSD ON/OFF: Turn the on-screen display on or off (see p. 39).
16:9/4:3: To select the aspect ratio of your TV (see p.42).
DECODER: To use a Pay TV decoder (or Satellite) with the unit (see p. 24).
OPR: To improve the playback picture (see p. 33).
NIC: To activate or deactivate the NICAM digital sound (see p. 41).

3. Press ◀/▶ to select the desired menu, then press OK/ENTER.
4. Press ▲+/▼– to select.
5. Press ⓘ/SETUP to return to the normal screen.

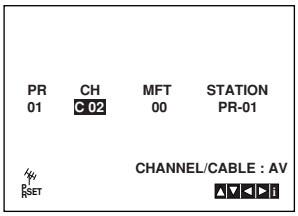
Setting the VCR Channels Manually

In certain areas of the country broadcast signals may be too weak for the unit's automatic tuning process to find or assign TV stations correctly.
You must tune in these weaker broadcast stations manually in order for the unit to store them.

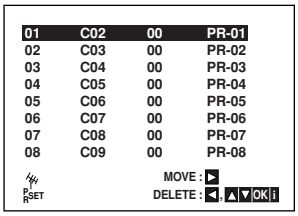
1. Press ⓘ/SETUP and the main menu will appear.



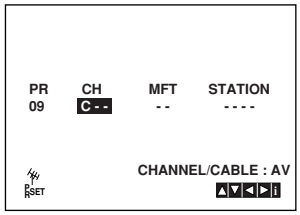
2. Press ◀/▶ to select the PR SET, then press OK/ENTER.



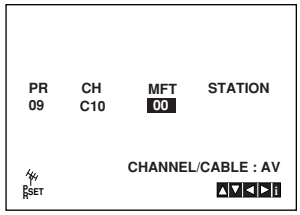
3. Press ⓘ/SETUP and the station table will appear.
   Press ▲+/▼– to select the program number that you want to tune (for example, PR 09).



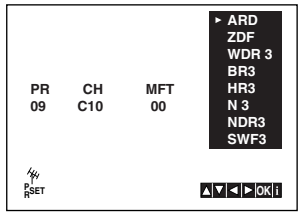
4 Press OK/ENTER.
Press INPUT SELECT to select C (Standard stations) or S (Cable stations):
C02–C69, S01–S41.
Enter the channel number of station that you want to tune with the numeric buttons or use ▲+/▼– to find the required station.



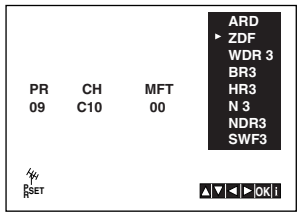
5 Searching will stop when it locates a station.
Press ▶ to select MFT.
Press ▲+/▼– to adjust.



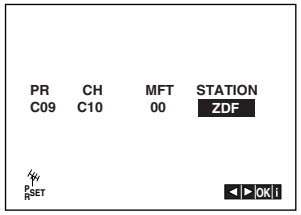
6 Press ▶ to select STATION so that you may name your TV station.
Press OK/ENTER and the TV station name list will appear.



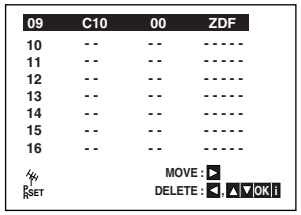
7 Press ▲+/▼– to select a station name from the list. Press OK/ENTER to select it.
- If your station name isn't on the list do not press OK/ENTER, but go to step 8.



8 You can change a TV station name manually rather than using the "standard" names.
Press ▶.
Press ▲+/▼– to select letters and numbers for the new station name.
Press ◀/▶ to move back and forth between characters.
Press OK/ENTER.



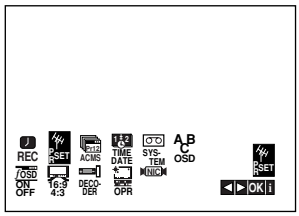
9 Press ⓘ/SETUP, confirm the station placement.
Press ⓘ/SETUP again.
- Your new TV station has now been tuned into the unit. If you wish to manually tune other stations repeat steps 2–9.



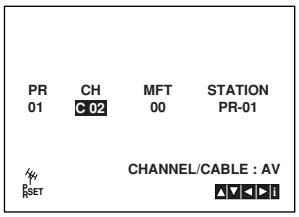
Changing the Order of TV Stations

After tuning TV stations into the unit you may wish to change the order in which they are stored without having to retune them again. The instructions given on this page will show you how you can simply move them into your desired order.

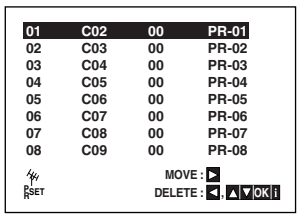
1 Press ⓘ/SETUP and the main menu will appear.



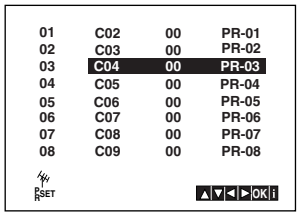
2 Press ◀/▶ to select the PR SET, then press OK/ENTER.



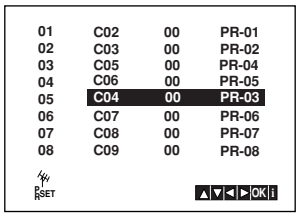
3 Press ⓘ/SETUP and the station table will appear.



4 Press ▲+/▼– to select the program number you want to move (for example, PR 03), then press ▶.

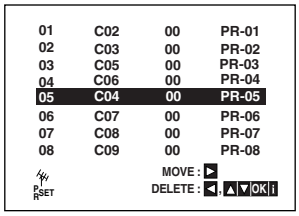


5 Press ▲+/▼– to select the program number you want to move to (for example, PR 05).



6 Press OK/ENTER.
The selected program will be moved to the new program number.

- If you wish to move other TV stations repeat steps 2–6.

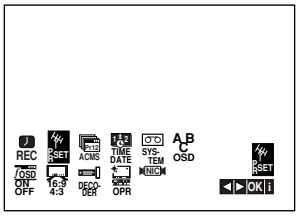


7 Press ⓘ/SETUP to return to the normal screen.

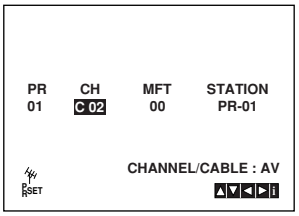
Deleting TV Stations

After tuning TV stations into the unit you may wish to delete a station.
The instructions given on this page will show you how easily delete any unwanted TV stations.

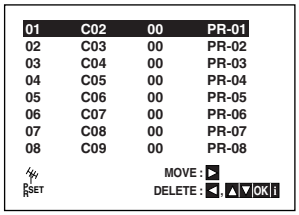
1 Press ⓘ/SETUP and the main menu will appear.



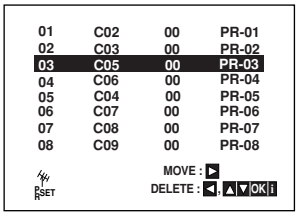
2 Press ◀/▶ to select the PR SET, then press OK/ENTER.



3 Press ⓘ/SETUP and the station table will appear.

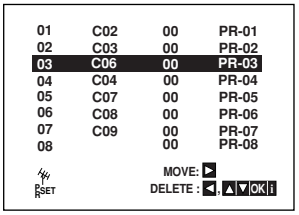


4 Press ▲+/▼– to select the program number you want to delete (for example, PR 03).



5 Press ◀.
After a short while, the selected station will be deleted.

- If you wish to delete other TV stations repeat steps 2–5.



6 Press ⓘ/SETUP to return to the normal screen.

How to Select Stored TV Stations

Stored TV stations can be selected in either of two ways.

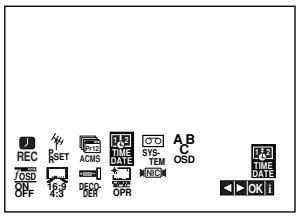
- Press CH/TRACKING ▲+/▼– to select different stations that are tuned into the unit.
- You may also directly select stations using the numeric buttons.

Setting the Clock Manually

You must set the date and time for timer recordings.

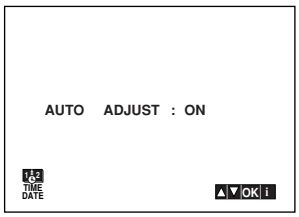
1 Press ⓘ/SETUP and the main menu will appear.

2 Press ◀/▶ to select the TIME DATE, then press OK/ENTER.



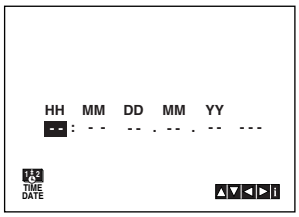
3 Press ▲+/▼– to set AUTO ADJUST to ON or OFF, then press OK/ENTER.

- The unit automatically corrects the clock setting once you set AUTO ADJUST to ON. After unpacking the unit, AUTO ADJUST is set to ON.
- When the clock cannot be set correctly by Auto set-up, we recommend to select OFF to avoid malfunction.



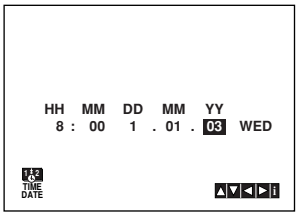
4 Set the hours using the numeric buttons.

- When selecting a number less than 10, press 0 to enter the tens digit and then press the buttons 1 through 9 to enter the ones digit.
- You can also select the hour using ▲+/▼–, then press ▶.
- Please note the unit uses a 24-hour clock. e.g. 1pm will be displayed as 13:00.



5 Set the minutes, day, month and year in the same way as in step 4.

- The day of the week will appear automatically when you enter the year.
- If you make a mistake press ◀/▶ and enter the correct details.



6 Press ⓘ/SETUP to return to the normal screen.

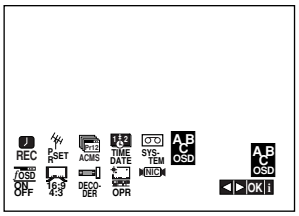
Notes

- The date can be set from A.D. 2001 to A.D. 2100.
- When the unit is turned off and accepts PDC/VPS information, the unit automatically corrects the clock anytime.
- The automatic clock adjusting function does not work in the following cases.
  - watching or recording a TV program without PDC/VPS information
  - TV station does not send or send wrong PDC/VPS information

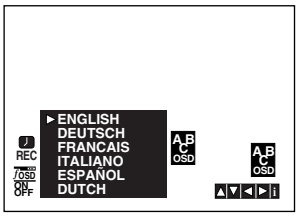
Setting the Language

The on-screen menu can display one of following six languages: English, German, French, Italian, Spanish and Dutch.

1. Press VIDEO to switch out to the VCR.
2. Press ⓘ/SETUP and the main menu will appear.
3. Press ◀/▶ to select the ABC OSD, then press OK/ENTER.



4. Press ▲+/▼– to select the desired language.

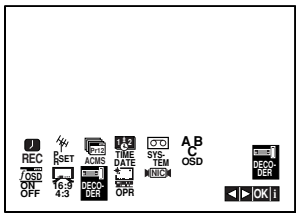


5. Press ⓘ/SETUP to return to the normal screen.

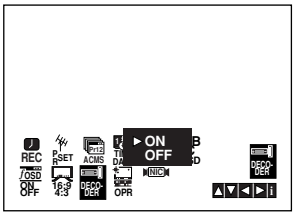
Using the Pay TV Decoder

When the Pay TV decoder is connected to the EURO AV2 DECODER jack on the rear, set DECODER in the menu to ON.

1. Press VIDEO to switch out to the VCR.
2. Press ⓘ/SETUP and the main menu will appear.
3. Press ◀/▶ to select the DECODER, then press OK/ENTER.



4. Press ▲+/▼– to select.
   ON: When the decoder is connected to the EURO AV2 DECODER jack.
   OFF: When another VCR is connected to the EURO AV2 DECODER jack.



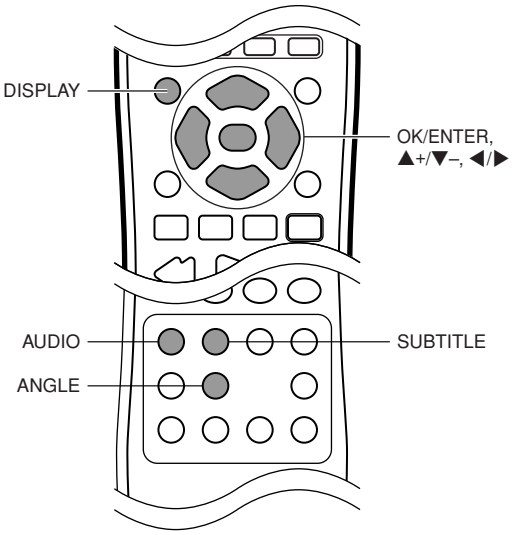
5. Press ⓘ/SETUP to return to the normal screen.

General Explanation

This manual gives the basic instructions for operating the unit. Some DVDs require specific operation or allow only limited operation during playback. When this occurs, the symbol ⃠ appears on the TV screen, indicating that the operation is not permitted by the unit or is not available on the disc.

On-Screen Display

The general playback status can be displayed on the TV screen. Some options can be changed on the menu.



On-screen Display Operation DVD VCD1.1 VCD2.0

1. Press DISPLAY during playback.
2. Use ▲+/▼– to select an option.
   The selected option will be highlighted.
3. Use ◀/▶ to change the setting of an option.
   The numeric buttons can also be used for setting numbers (e.g., title number). For some functions, press OK/ENTER to execute the setting.

Temporary Feedback Field Icons

TITLE	Repeat Title DVD
CHAPTER	Repeat Chapter DVD
TRACK	Repeat Track VCD1.1 CD
ALL	Repeat All Tracks VCD1.1 CD
A - B	Repeat A-B
Off	Repeat Off
II■	Resume play from this point
⃠	Action prohibited or not available

Notes

- Some discs may not provide all of the features on the on-screen display example shown below.
- If no button is pressed for 10 seconds, the on-screen display disappears.

DVD

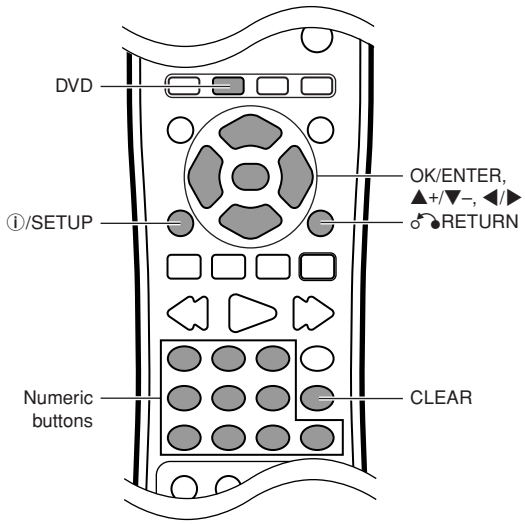
Options	Function (Press ▲+/▼– to select desired option)		Selection Method
Title Number	2/3	**Shows the current title number and** skips to the desired title number.	◀/▶ or numeric buttons
Chapter Number	1/28	**Shows the current chapter number and** skips to the desired chapter number.	◀/▶ or numeric buttons
Time search	0:00:11	**Shows the elapsed playing time and** searches the point by the elapsed time directly.	numeric buttons
Audio language and Digital Audio Output mode	1 ENG DD 5.1 CH	**Shows the current audio soundtrack language, encoding method, and channel number and** changes the setting.	◀/▶, AUDIO
Subtitle language	1 ENG	**Shows the current subtitles language and** changes the setting.	◀/▶, SUBTITLE
Angle	1/1	**Shows the current angle number and** changes the angle number.	◀/▶, ANGLE
Sound	NORM.	**Shows the current sound mode and** changes the setting.	◀/▶

VCD1.1 VCD2.0

Options	Function (Press ▲+/▼– to select desired option)		Selection Method
Track Number	1/10	**Shows the current track number and** skips to the desired track number.	◀/▶ or numeric buttons
Time	0:00:11	**Shows the elapsed playing time (Display only)**	—
Audio Channel	STER.	**Shows the audio channel and** changes the audio channel.	◀/▶, AUDIO
Sound	NORM.	**Shows the current sound mode and** changes the setting.	◀/▶

Initial Settings

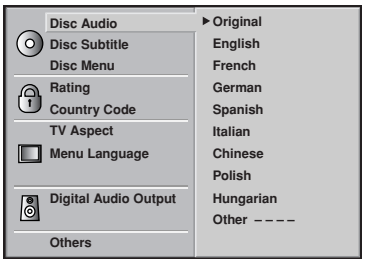
You can set your own Personal Preferences on the unit.



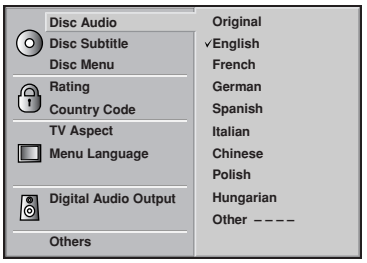
General Operation

1. Press DVD to switch out to the DVD.
2. Press ⓘ/SETUP.
   The setup menu appears.

3. Select the desired item with ▲+/▼–, then press ▶ to move to options.



4. Use ▲+/▼– to select the desired option and press OK/ENTER.

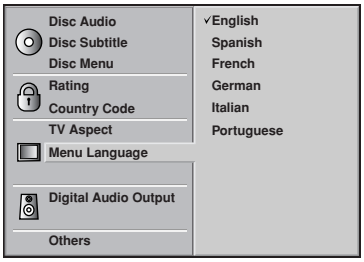


Some options require additional steps.

5. Press ⓘ/SETUP or ↶RETURN to exit the setup menu.

Menu Language

You choose what languages are displayed for the setup menu.



Disc Audio / Disc Subtitle / Disc Menu DVD

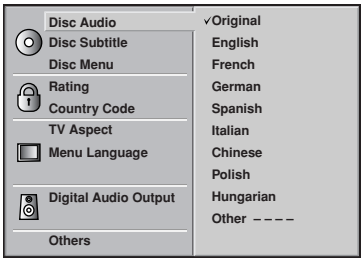
You can set the default language for Disc Audio, Disc Subtitle and Disc Menu. Other and Original are also available.

Original: The original language set for the disc.

Other: To select a language not listed use ▲+/▼– to select Other _ _ _ _. Input a 4-digit number for the language you want (see "Language Code List" on page 56) and press OK/ENTER.

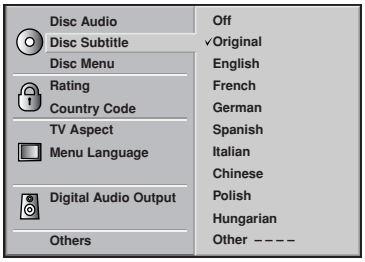
Disc Audio

All 8 languages, Original and Other



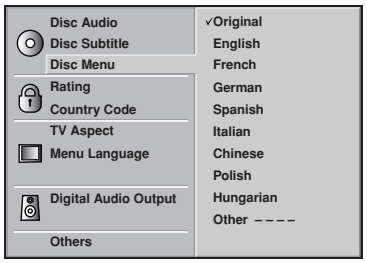
Disc Subtitle

All 8 languages, Off, Original and Other



Disc Menu

All 8 languages, Original and Other

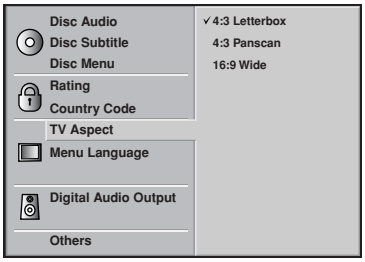


Note

Language selection for Disc Audio, Disc Subtitle and Disc Menu may not be available on the DVD and so will not be displayed even though you have selected them.

TV Aspect DVD

Select the appropriate display format, depending on whether you are using a conventional (4:3) or wide-screen (16:9) TV.



4:3 Letterbox:

Select when a standard 4:3 TV is connected. The theatrical images with masking bars above and below the picture are displayed.

4:3 Panscan:

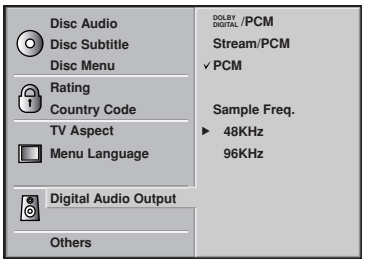
Pictures cropped to fill your TV screen are displayed. The right and left edges of the picture are cut off.

16:9 Wide:

Select when a 16:9 wide TV is connected.

Digital Audio Output DVD

Each DVD disc has a variety of audio output options. Set the digital audio output of the unit, according to the type of audio system you use.



DOLBY DIGITAL/PCM:
You can select the correct input type when playing back DVDs recorded with Dolby Digital and using a Dolby Digital decoder equipped AV receiver.
Select DOLBY DIGITAL/PCM when the unit's COAXIAL jack is connected to an AV receiver or other equipment with a Dolby Digital decoder. Otherwise, select PCM.

Stream/PCM:
You can select the correct input type when playing back DVDs recorded with DTS and using a DTS decoder equipped AV receiver.
Select Stream/PCM when the unit's COAXIAL jack is connected to an AV receiver or other equipment with a DTS decoder. Otherwise, select PCM.

PCM:
Select PCM when the unit's COAXIAL jack is connected to an AV receiver or other equipment without a Dolby Digital, DTS or other special decoder.

⚠

DO NOT select DOLBY DIGITAL/PCM or Stream/PCM for the Digital Audio Output setting in the setup menu when connecting to an AV receiver not equipped with a Dolby Digital or DTS decoder (with a coaxial connecting cord).
Merely attempting to play a disc may cause a screeching noise that could be harmful to your ears and damage the speakers. Be sure to select PCM for the Digital Audio Output setting.

Playback disc	Output		
	DOLBY DIGITAL/ PCM	**Stream/ PCM**	**PCM**
96-kHz linear PCM DVD	PCM	PCM	PCM
DTS DVD	Not output	DTS bit stream	Not output
Dolby Digital DVD	Dolby Digital bit stream	Dolby Digital bit stream	PCM
MPEG DVD	PCM	MPEG bit stream	PCM
Audio CD	PCM	PCM	PCM
DTS audio CD	Not output	DTS bit stream	Not output

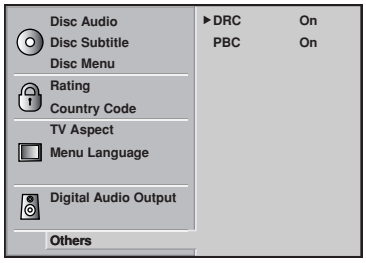
Sample Freq. (Sampling Frequency)
Press ▲+/▼– to select the sampling frequency and press OK/ENTER, after the audio output option was fixed by pressing OK/ENTER.

48KHz:
If your receiver or amplifier is NOT capable of handling 96 kHz signals, select 48KHz. When this choice is made, this unit will automatically convert any 96 kHz signals to 48 kHz so your system can decode them.

96KHz:
If your receiver or amplifier is capable of handling 96 kHz signals, select 96KHz. When this choice is made, this unit will pass each type of signal through without any further processing.

Others DVD VCD2.0

You can turn on and off the DRC (Dynamic Range Control) and PBC (Playback Control) functions.



1. Select “Others” on the setup menu using ▲+/▼–, then press ▶.
2. Press ▲+/▼– to select the desired option.
3. Press OK/ENTER repeatedly to select “On” or “Off”.

DRC (Dynamic Range Control)
When the DRC is turned on, the unit compresses the dynamic range of the audio output (i.e. the difference between the loudest and the quietest sounds) so that you can listen to a movie or music at a low volume without losing the clarity of sound.
On:
Select this to play a disc at a low volume.
Off:
Select this to play a disc without DRC.

Note
DRC only works for analog audio outputs of the unit while playing a DVD recorded in Dolby Digital (AC-3) Format.

PBC (Playback Control)
When PBC is turned off, the video CD version 2.0 is played continuously without returning to the menu screen and operated the same way as the video CD version 1.1.
On:
Video CDs with PBC are played according to the PBC.
Off:
Video CDs with PBC are played the same way as Audio CDs.

To exit the selection field
Press ◀.

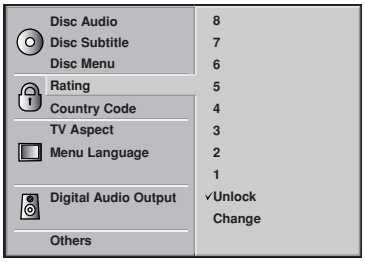
Rating DVD

Some DVDs contain parental control information that applies to the complete disc or certain scenes on the disc. By using the parental control feature of the unit, you can specify the restriction level to prevent the unit from playing scenes not suitable for children (for example, scenes of excessive violence).
The unit is also equipped with a password-locking mechanism designed to prevent children from changing the restriction level.

Notes

- Parental control does not function with DVDs which do not contain parental control information.
- Parental control does not function if the parental control information on the DVD does not match the country code setting (next page).

1 Select “Rating” on the setup menu using ▲+/▼–, then press ▶.



2 Enter a 4-digit password using the numeric buttons.

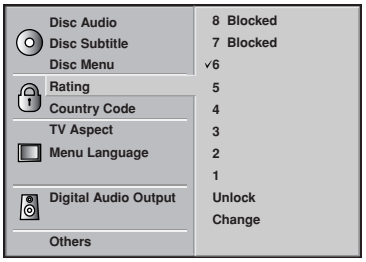
When you have not entered a password yet
Enter a 4-digit password and press OK/ENTER. Then, enter the password again and press OK/ENTER to confirm it.

Example: To enter password “1234”, press the numeric buttons 1, 2, 3 and then 4.

When you have already entered a password
Enter the password and press OK/ENTER.

If you entered a wrong number
Press CLEAR and re-enter the correct password, then press OK/ENTER.

3 Press ▲+/▼– to select the desired restriction level and press OK/ENTER.



You cannot play DVDs rated higher than the level you have selected unless you cancel the parental control. For example, selecting level 1 makes it impossible to play any disc with a rating of 2 to 8.
In the next “Country Code” section, adjust the restriction level you have set here to the cinema rating system of the country where the DVD disc was produced.

To cancel the parental control
Select “Unlock” in step 3.

To change the password

1 In step 3 above, press ▲+/▼– to select “Change” and press OK/ENTER.

2 Enter a new 4-digit password and press OK/ENTER.

3 Enter the password again and press OK/ENTER to confirm it.

If you forget the password
Carry out the following procedure to clear the current password.

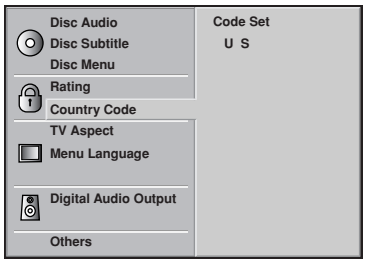
1 Press ⓘ/SETUP to display the setup menu. If the setup menu has been displayed, first exit the setup menu.

2 Press ❚❚ and use the numeric buttons to enter the 6-digit number “210499”.
The current password is cleared.

Country Code DVD

After specifying the restriction level in the previous "Rating" section, set the country code so that the set restriction level is adjusted to the cinema rating system of the country where the DVD disc was produced.

1 Select Country Code on the setup menu using ▲+/▼–, then press ▶.



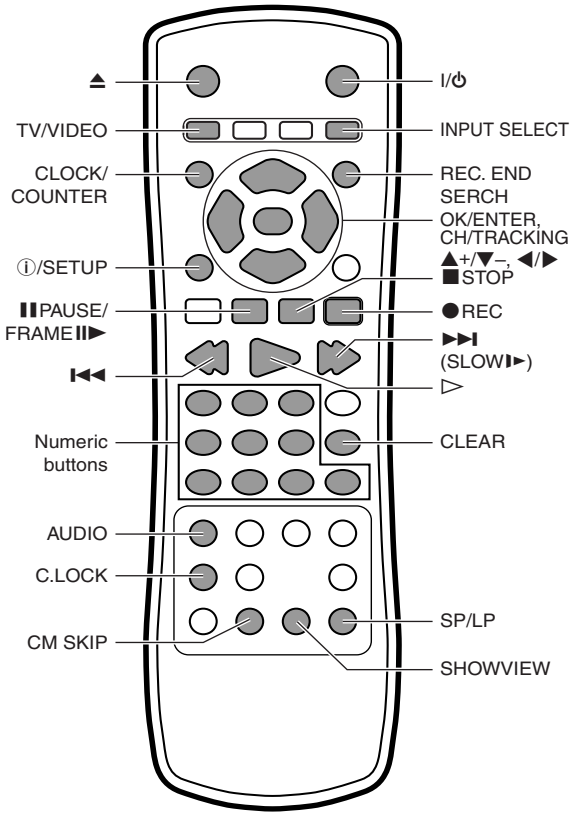
2 Carry out step 2 of "Rating" on the previous page.

3 Press ▲+/▼– to select the first character of the country code and press ▶.
Refer to the country code list on pages 54 and 55.

4 Press ▲+/▼– to select the second character of the country code and press OK/ENTER.

To change the country code
Follow the above steps again.

Operation with Tape



Playing a Tape

You will only be able to load and eject video cassettes when the unit is plugged into an AC outlet.
This unit may also playback recordings from NTSC tapes (on PAL TV).

Getting a better picture
When a cassette is inserted and playback started, the automatic tracking function works to get the best possible picture automatically. If the quality of the recording is poor, repeatedly press CH/TRACKING ▲+/▼– on the remote control or CHANNEL +/– on the front panel to manually adjust the tracking until any distortions have been removed.

Note
Automtic tracking returns to the normal position when the video cassette is ejected.

1 Make sure that you have correctly connected the unit as described earlier in this book.
Turn on your TV.
Press I/⏻ to turn on the unit, then insert the video cassette into the unit.
- The video cassette should have the window side facing up and the arrow facing away from you.

2 Press ▷ to start playing your tape.
- If you load a video cassette which has had its record protection tab removed, playback of the cassette will start automatically.

3 Press ❚❚PAUSE/FRAME❚❚► to still a picture.
Press ❚❚PAUSE/FRAME❚❚► repeatedly to advance the tape frame by frame.
- Tapes can be paused for up to 5 minutes. After 5 minutes the unit will stop the tape to prevent damaging the tape or the unit.
- Still picture quality can be improved slightly by pressing CH/TRACKING ▲+/▼–.

4 **Slow motion:**
During still picture hold down ►►❙ (SLOW❙►).
The picture will be slowed down at about 1/19 times the normal playback.
- During slow motion, the noise bars may appear on the picture according to the status of tape. If distortions can be seen in the picture, reduce them with CH/TRACKING ▲+/▼–.
- If slow motion continues for more than 3 minutes, the unit will automatically change to normal playback.

5 Press ▷ to continue playing your tape.
Playback Search
During playback press ►►❙ or ❙◄◄. The picture is played back at 7 times normal speed. To return to normal-speed playback, press ▷.

6 Press ■STOP to end playback.
Press ⏏.
- If the end of the tape is reached, the unit will stop playback automatically, rewind, stop, eject the tape.

Fast Forward/Rewind Search

From the STOP mode you can press ►►❙ or ❙◄◄ to quickly move through the tape. If you wish to see a portion of the tape during ►►❙ or ❙◄◄ press and hold ►►❙ or ❙◄◄. While the buttons are held down the picture is played back at 7 times normal speed. When you release the buttons ►►❙ or ❙◄◄ resumes.

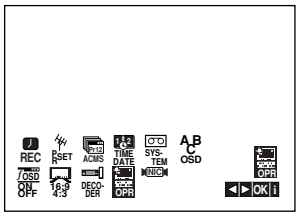
CM Skip (Commercials Skip)

This feature enables you during playback of a tape to skip a commercial break in a few seconds, then resume normal playback.
While tape is playing press CM SKIP to skip commercial (or another program material).
Repeatedly press CM SKIP to skip:
1 Press 30 seconds
2 Press 60 seconds
3 Press 90 seconds
4 Press 120 seconds
5 Press 150 seconds
6 Press 180 seconds

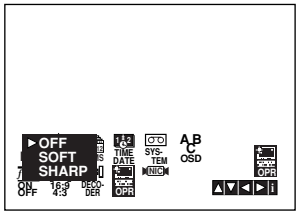
OPR (Optimum Picture Response)

This feature automatically improves playback picture quality by adjusting the unit to the condition of the tape.

1 Press ⓘ/SETUP during playback of a tape. Press ◀/▶ to select the OPR, then press OK/ENTER.



2 Press ▲+/▼– to select: OFF, SOFT or SHARP.



3 Press ⓘ/SETUP to return to the normal screen.

Note

OPR is automatically set to off when a cassette is ejected or the power is turned off.

One-Touch Recording (OTR)

This unit allows you to make recordings using a variety of simple methods:
One-Touch Recording (OTR) start recording immediately for a set period of time or until the video cassette reaches the end.
The unit incorporates Long Play (LP) which enables you to record up to twice the amount of time on a video cassette. For example an E-180 will record up to 180 minutes using Standard Play (SP); using LP you will be able to record up to 360 minutes. Please note there will be a slight loss in picture and sound quality when using LP.

1 Make sure that you have correctly connected the unit as described earlier in this book.
Turn on your TV. Press I/⏻ to turn on the unit.

2 Insert a video cassette with protection tab into the unit.
- The video cassette should have the window side facing up and the arrow facing away from you.

3 Press CH/TRACKING ▲+/▼– to select the program number you wish to record.
You may also directly select program number using the numeric buttons.

4 If you wish to record directly from the EURO AV1/2 or AV 3 IN jacks repeatedly press INPUT SELECT until the jack you wish to record from is displayed.
AV 1 for recording from EURO AV1 AUDIO/VIDEO jack on the rear of the unit.
AV 2 for recording from EURO AV2 DECODER jack on the rear of the unit.
AV 3 for recording from AV 3 IN VIDEO and AUDIO (Left & Right) jacks on the front of the unit.

5 Press SP/LP if you wish to record in Long Play or Standard Play.
- SP will produce improved picture and sound quality, however LP will provide twice as much recording time as SP.

6 Press ●REC to start recording. RECORD will appear on the TV screen.
Press ●REC several times. Each successive press will increase the record time by 30 minutes until you reach a maximum of 9 hours.

To pause while recording

Press ❚❚PAUSE/FRAME❚❚► to avoid recording unwanted scenes.

Press ❚❚PAUSE/FRAME❚❚► to continue recording.

- Tapes can be paused for up to 5 minutes; RECP will be displayed when a tape is paused. After 5 minutes the unit will stop recording to prevent damaging the tape or the unit.

To stop recording

Press ■STOP.

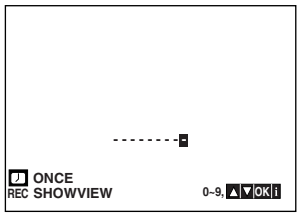
Notes

- If you do not wish to record on a tape (this can happen quite easily by accident!) remove the protection tab on the back edge of the video cassette.
- It is possible to record on a video cassette with the record protection tab removed by covering the hole with adhesive tape.
- Remember you can record one program while watching another by starting your one-touch recording, press TV/VIDEO to select TV mode and then selecting a different channel on your TV.

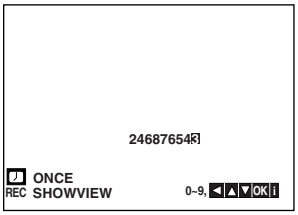
ShowView Programming

ShowView greatly simplifies entering the date, channel, start and end times of a Timer Recording by simply entering a ShowView Code. ShowView Codes are published in most TV guide magazines; they can vary one to nine numbers in length.

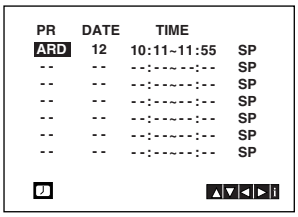
1. Press VIDEO to switch out to the VCR.
2. Make sure that TV channels have been tuned and stored in correct ShowView order.
   Insert a video cassette with protection tab into the unit.
3. Press SHOWVIEW.



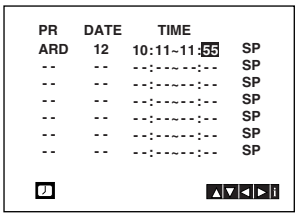
4. Press ▲+/▼– to select the recording type.
   ONCE: To record once.
   DAILY: To record every day (except Saturday and Sunday) at the same time.
   WEEKLY: To record at the same time every week.
5. Press the numeric buttons to enter the ShowView Code of the TV program that you wish to record.
   - If you make a mistake press ◀ then enter the revised number.



6. Press OK/ENTER.
   If PLEASE CHECK is displayed it means that you have entered the wrong ShowView number, entered the ShowView number incorrectly.
   If "- -" is displayed, you have to enter the program number of the station, you want to record from.

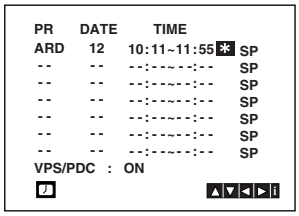


7. Press ◀/▶ to select the settings that you wish to revise (PR: preset the channel position or TV station's name, DATE, TIME, VPS/PDC and tape speed: SP, LP or IP).
   Press ▲+/▼– to enter the correct information.



8 Press ◀/▶ until the blank space between endtime and tape speed is highlighted. Then press ▲+/▼– to switch VPS/PDC on or off.
Press ▶ to select the recording speed.
Press ▲+/▼– to select the desired tape speed (SP, IP, or LP).

- IP mode determines how much tape is left and switches speed from SP to LP, if necessary, to complete recording the program. IP mode is not selected when VPS/PDC is ON.
- If you wish to record from the EURO AV1/2 or AV 3 IN jacks, press INPUT SELECT to select for correct display (AV1, AV2 or AV3).



9 Check that the timer event details are correct.
If you want to make another ShowView recording repeat steps 3–8.

10 Press ⓘ/SETUP twice and press I/⏻ to turn off the unit.
⏲ will appear in the display while the unit waits to make the recording.

- If PLEASE CHECK is displayed, you have entered incorrect information and will need to re-enter the data.
- If the program overlaps another, see page 37.

Note

If the timer program list and “PROGRAM FULL” appear on the TV screen in step 2, 7 programs are already set. Cancel an unnecessary program.

Video Program System (VPS)

The Video Program System (VPS) ensures that the TV program that you have programmed for timer recording will be recorded exactly from their beginning to end, even if the actual broadcasting time differs from the scheduled time due to delayed start, or if the program is extended beyond its scheduled time. Also, if a program is interrupted, for example, if a news flash is inserted, the recording will also be interrupted automatically and resumed when the program continues.
The VPS signal is broadcast by the TV station and this controls the timer in the unit.
VPS should be set ON for all timer recordings from TV stations broadcasting these signals. It should be set OFF for all timer recordings from TV stations that are not broadcasting these signals.
*** The similar system PDC, which is used in the time being in the Netherlands, can also be used with this unit.

Notes

- **Do not set PDC/VPS to ON for a non-PDC/VPS channel.**
- When the PDC/VPS signal drops out because the broadcast signal is weak, or when a broadcasting station does not transmit a regular PDC/VPS signal, the timer recording will be performed in the normal mode (without PDC/VPS) even if it was programmed for PDC/VPS.

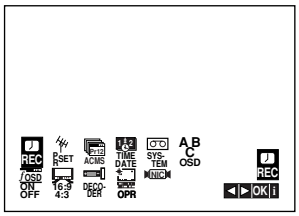
Timer Recording Using On Screen Display

You may set up to 7 timer record events within one month of the current date.

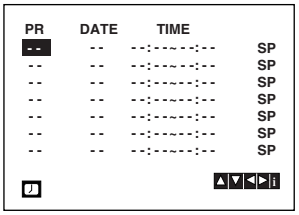
Note

Before setting the timer make sure that you have set the unit's clock correctly and you know which stations you have tuned TV stations on the unit.

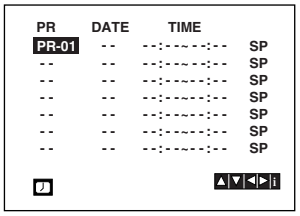
1. Press VIDEO to switch out to the VCR.
2. Insert a video cassette with protection tab into the unit.
   - The video cassette should have the window side facing up and the arrow facing away from you.
3. Press ⓘ/SETUP and the main menu will appear.
4. Press ◀/▶ to select the REC, then press OK/ENTER.



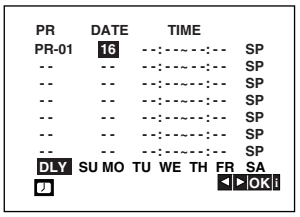
5. Press OK/ENTER to start setting the timer record event.
   - If all timer record events are full press ▲+/▼– to select the event that you wish to remove and replace, then press ◀ to delete the event.



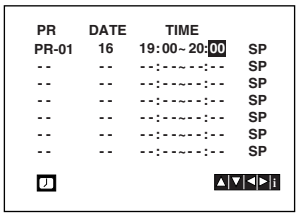
6. Press the numeric buttons to enter the station that you wish to record.
   When selecting stations 1–9, press 0 first, then the channel number; for example Stations 3 - 03.
   - You may also select Channels by pressing ▲+/▼–. Once selected press ▶.
   - If you wish to record from the EURO AV 1/2 or AV 3 IN jacks, press INPUT SELECT to select for correct display (AV1, AV2 or AV3).



7. Press the numeric buttons to enter the date of the program.
   If you press OK/ENTER before entering the date you may select one of the following automated recording features. Press ◀/▶ to select, then press OK/ENTER to confirm.
   DLY to record every day (except Saturday and Sunday) at the same time.
   Weekly to record at the same time every week.

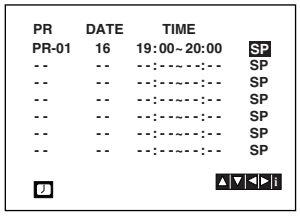


8. Press the numeric buttons to enter the recording start and end times of the program that you wish to record.
   - Please note the unit uses a 24-hour clock. e.g. 1 pm will be displayed as 13:00.
   - You may also select the start and end times by pressing ▲+/▼–.



9 Press ◀/▶ until the blank space between endtime and tape speed is highlighted. Then press ▲+/▼– to switch VPS/PDC on or off. Press ▶ to select the recording speed. Press ▲+/▼– to select the desired tape speed (SP, IP, or LP).

- IP mode determines how much tape is left and switches speed from SP to LP, if necessary, to complete recording the program. IP mode is not selected when VPS/PDC is ON.



10 Check that the timer event details are correct. Press ⓘ/SETUP twice and press I/⏻ to turn off the unit.
⏲ will appear in the display while the unit waits to make the recording.

- If PLEASE CHECK is displayed, you have entered incorrect and will need to re-enter the data.

Note

If the timer program list and "PROGRAM FULL" appear on the TV screen in step 4, 7 programs are already set. Cancel an unnecessary program.

Delete or change the settings in timer event memory

If at a later date you wish to delete or change any of the settings in timer event memory you may do so without having to enter all the timer event information again.

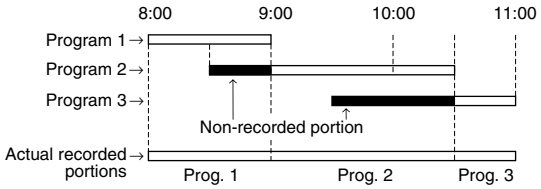
1 Display the timer event screen.

2 Press ▲+/▼– to select the event that you wish to delete or change.

3 Press ◀ to delete the event
or
Press OK/ENTER to change; then press ◀/▶ to select; Station, Date, Start and End times and Tape speed. Press ▲+/▼– to enter the correct information.

If the program overlaps another

Do not overlap programs, since overlapping portions of the conflicting programs will not be recorded. Earlier recording times have priority over later recording times as shown in the diagram.



Copying from DVD to VCR

This unit allows you to copy the contents of a DVD to a video cassette tape.

Note

If the DVD you are attempting to copy is copy protected, you will not be able to copy the disc. It is not permitted to copy Macrovision encoded DVDs. “LOCK” is displayed in the display window.

1. Insert the disc you wish to copy in the DVD deck and close the disc tray.
2. Insert a blank video cassette into the VCR deck.
3. Press DVD on the remote control and then press ▷.
   The DVD will go into play mode.
   - If the DVD disc menu appears, you may need to press ▷ manually to begin copying.
4. Press ●REC on the unit.
   The unit will go into Record mode.

To stop copying

When the DVD is finished playing, press ■STOP to end the copy.
You must stop the Copy process manually when the DVD movie ends, or the unit may replay and record over and over again.

Recording from another Video Recorder

With this unit you can make recordings from an external source, such as copying from another video recorder or a camcorder.

Note

In the following description, this unit will be one used for recording and will be referred to as this unit. The other appliance will be used for playback and will be referred to as VCR A.

1. VCR A should be connected to the EURO AV2 DECODER jack on the rear panel of this unit or the AV 3 IN jacks on the front panel of this unit.
2. Insert the recorded video cassette tape into the VCR A and a blank video cassette into this unit.
3. To start recording, press ●REC on this unit and PLAY on VCR A.
4. When you want to finish copying, press ■STOP on both video recorders.

On Screen Display

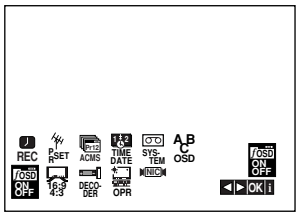
You may easily display the current time or tape counter, amount of tape left, day, month, year, day of week, program channel, tape speed and operational mode of the unit will appear on the TV screen. If a recording is taking place these On Screen Displays will not be recorded onto the tape.

1. Press CLOCK/COUNTER to display.
   Press CLOCK/COUNTER repeatedly to cycle through the display options. The tape counter and amount of tape left will appear if there is a tape loaded.
2. After 3 seconds the majority of the On Screen Displays will clear leaving only the clock or tape counter and the amount of tape left on the screen.
   Press CLOCK/COUNTER again to remove all displays from the TV screen.

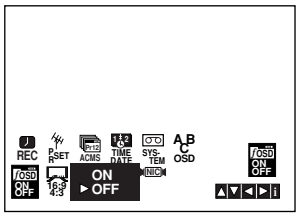
Turning On/Off the On Screen Display

Set the OSD off when dubbing a tape to another tape.

1. Press ⓘ/SETUP and the main menu will appear.
2. Press ◀/▶ to select the f.OSD ON/OFF, then press OK/ENTER.



3. Press ▲+/▼– to select ON or OFF.



4. Press ⓘ/SETUP to return to the normal screen.

Child Lock

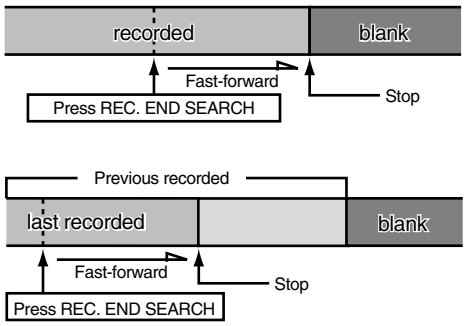
The control buttons on the front of the unit can be switched off, so that the unit can only be operated using the remote control.

1. Press C.LOCK.
   SAFE will appear in the display window.
   None of the buttons on the front of the unit will work (except ■ and ⏏).
   If any buttons on the front of the unit are pressed SAFE will flicker in the display window for a few seconds.
2. Press C.LOCK again to switch off the child lock.
   OFF will appear in the display window.

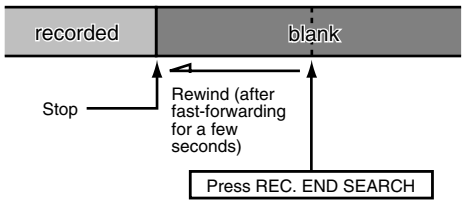
REC. End Search

You can fast-forward or rewind the tape at the end of the recorded program automatically.
Press REC. END SEARCH during stop.
The unit starts searching.
Searching stops automatically after fast-forwarding or rewinding as below:

Fast-forward



Rewind



To stop REC. End Search
Press ■STOP.

Notes

- When the tape does not have blank space, searching stops at the end of the tape.
- If a recorded portion left is less than 5 minutes in SP mode or 15 minutes in LP mode when REC. END SEARCH is pressed, this function does not work correctly.
- If a tape has been recorded over in a different mode, either SP or LP mode, REC. End Search may not work completely.

Playing at Various Speeds

During playback
Press ◀ or ▶ repeatedly during playback. Each press varies the playback speed gradually as follows:

Press	The VCR switches
▶ once	forward playback at twice speed
▶ twice	forward search
◀ once	forward slow motion playback
◀ twice	still
◀ 3 times	reverse playback
◀ 4 times	reverse playback at 3 times speed
◀ 5 times	reverse search

During still
Press ◀ or ▶ repeatedly during still. Each press varies the playback speed gradually as follows:

Press	The VCR switches
▶ once	forward slow motion playback
▶ twice	forward playback
▶ 3 times	forward playback at twice speed
▶ 4 times	forward search
◀ once	reverse playback
◀ twice	reverse playback at 3 times speed
◀ 3 times	reverse search

Tips

- You can adjust unstable pictures during still by pressing CH/TRACKING ▲+ or ▼– repeatedly.
- Depending on the tape, noise lines may appear or color may fade during still, and forward and reverse searches. You can move the noise lines during forward and reverse searches by pressing CH/TRACKING ▲+ or ▼– repeatedly.
- If noise lines appear on the still picture, press ▶ to play back at slow speed. Press CH/TRACKING ▲+ or ▼– to move the noise lines, then ◀ to return to the still picture.

Note

Reverse slow motion playback cannot be made.

Hi-Fi Stereo Sound System

This unit will record and playback Hi-Fi stereo sound. In addition it has a NICAM digital stereo sound decoder. This allows you to record and playback the sound in several different ways. Video cassettes recorded on the unit will have a normal mono audio track and two VHS Hi-Fi stereo audio tracks. These stereo tracks allow you to make audio recordings in Hi-Fi stereo or bilingual mode from a TV broadcast, stereo audio system, video disc or another Hi-Fi VCR.

1 The unit allows you to enjoy broadcasts with standard stereo, bilingual and mono sound. The particular type of sound received or that recorded will be briefly displayed on the TV screen for a couple of seconds:

STEREO

Sound is automatically recorded on the Hi-Fi stereo and mono tracks of the video tape.

BIL NICAM

Both audio channels will be recorded on the Hi-Fi stereo tracks. The primary language channel (left) will be recorded on the mono track of the video tape.

MONO

The sound is recorded on the Hi-Fi tracks and the mono track of the video tape without any separation.

2 Press AUDIO repeatedly until the desired audio mode appears.

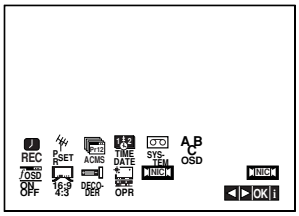
The choice is STEREO, LEFT, RIGHT and MONO.

- In BIL NICAM playback the primary language is output on the left channel and the secondary channel is output simultaneously from the right channel when audio output is set to STEREO. The primary language will be output from both channels when the audio setting is MONO.
- Please note that when adjusting the tracking control Hi-Fi stereo sound may revert to MONO.

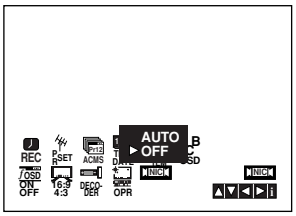
To select the standard sound when NICAM sound has noise or you want to record standard sound regardless of the broadcast type

1 Press ⓘ/SETUP and the main menu will appear.

2 Press ◀/▶ to select the NIC, then press OK/ENTER.



3 Press ▲+/▼– to select OFF.



4 Press ⓘ/SETUP to return to the normal screen.

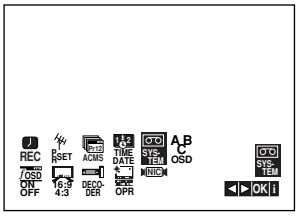
Notes

- You cannot select NIC when the unit is in AV1, AV2 or AV3 mode.
- When you set NICAM to OFF, the sound is always output in mono.

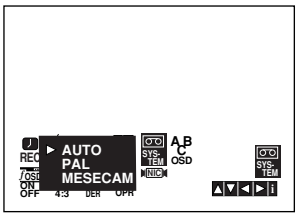
To Set the Color System

Normally the AUTO setting is sufficient. If the playback picture color is abnormal, select the color system of the cassette you are using.

1. Press ⓘ/SETUP and the main menu will appear.
2. Press ◀/▶ to select the SYSTEM, then press OK/ENTER.



3. Press ▲+/▼– to select according to the color system used.



4. Press ⓘ/SETUP to return to the normal screen.

Note

The color system setting is automatically returned to AUTO if the cassette is ejected.

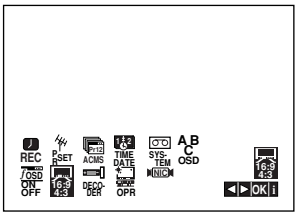
Wide Screen Compatibility 16:9

This unit can record and play back wide screen aspect ratio programs (16:9). To record a wide screen format program successfully the correct type of wide screen signal must be broadcast by the TV station.

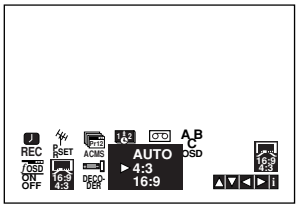
Note

To enjoy Wide-Screen playback you must connect the unit to the TV using a 21-pin scart cord.

1. Press VIDEO to switch output to the VCR.
2. Press ⓘ/SETUP and the main menu will appear.
3. Press ◀/▶ to select the 16:9/4:3, then press OK/ENTER.

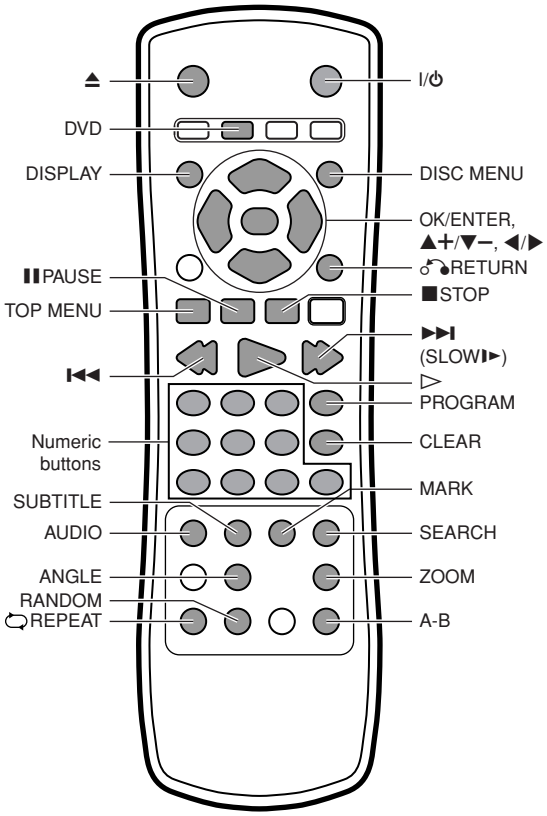


4. Press ▲+/▼– to select: AUTO, 4:3 or 16:9.
   AUTO: Automatically plays back Wide-Screen programs as Wide-Screen and Normal programs as normal.
   4:3: Only for playing back and recording Normal format recordings (4:3).
   16:9: Only for playing back and recording Wide-Screen format recordings (16:9).



5. Press ⓘ/SETUP to return to the normal screen.

Operation with DVD and Video CD



Playing Discs DVD VCD2.0 VCD1.1

Preparation:

- Turn on the TV and select the video input source connected to the unit.
- Audio system: Turn on the audio system and select the input source connected to the unit.

1. Press DVD to switch out to the DVD.
2. Press ⏏ (OPEN/CLOSE) to open the disc tray.
3. Load your chosen disc in the tray, with the label facing up.
   - When a double-sided DVD is inserted, make sure the side you want to play is facing down.
4. Press ⏏ (OPEN/CLOSE) to close the tray. Disc icon appears in the display window, and playback starts automatically. If playback does not start, press ▷. In some cases, the disc menu might appear instead.

If a Menu Screen is Displayed

The menu screen may be displayed first after loading a DVD or Video CD that contains a menu.

DVD

Use ◀/▶/▲+/▼– buttons to select the title/chapter you want to view, then press OK/ENTER to start playback.
Press TOP MENU or DISC MENU to return to the menu screen.

VCD2.0

Use the numeric buttons to select the track you want to view.
Press RETURN to return to the menu screen.

- You can turn on and off PBC (Playback Control) by operating the setup menu (see page 29). When PBC is turned off, you can play the disc continuously without returning to the menu screen.

Notes

- Menu setting and the exact operating procedures for using the menu may differ depending on the disc. Follow the instructions on the each menu screen.
- If Rating is set and the disc is not within the rating settings (not authorized), the 4-digit password must be entered and/or the disc must be authorized (see “Rating”, on page 30).
- DVDs may have a region code.
- Your unit will not play discs that have a region code different from your unit. The region code for this unit is 2.

About the ⃠ Symbol Display

“⃠” may appear on the TV screen during operation. This icon means the function explained in this owner’s manual is not available on that specific DVD video disc.

To stop playback
Press ■STOP.

To turn the power off
Press I/⏻.
The unit enters power off standby mode.

No turning off the power during timer recording
During OTR (One-Touch Recording), ShowView recording or timer recording, the unit cannot be turned off until recording has stopped.

Resuming Playback DVD VCD2.0 VCD1.1

When the unit enters stop mode with the resume function turned on, the unit remembers the point where you stopped the disc so that you can resume playback from the point.

Press ▷ in stop mode.
The unit starts playback from the point where you stopped the disc last time.

To cancel the resume function
Press ■STOP again after you stop playback.

General Features

Note
Unless stated otherwise, all operations described use the remote control. Some features may also be available on the setup menu.

Moving to another TITLE DVD 2/3

When a disc has more than one title, you can move to another title as follows:

1. Press DISPLAY.
2. Press ▲+/▼– to select title icon.
3. Press ◀/▶ to select a title number or enter the number of a title.
   The newly selected title begins.

Moving to another CHAPTER/TRACK

DVD VCD1.1 1/28 1/10

When a title on a disc has more than one chapter or a disc has more than one track, you can move to another chapter/track as follows:

- Press ⏮ or ⏭ briefly during playback to return to the beginning of the current chapter/track or to select the next chapter/track.
- Press ⏮ twice briefly to step back to the previous chapter/track.
- To go directly to any chapter/track during playback, press DISPLAY. Then, press ▲+/▼– to select chapter/track icon. Then, select the chapter/track number using the ◀/▶ or enter the number of the chapter/track. The newly selected chapter/track begins.

Slow Motion DVD VCD2.0 VCD1.1

1. Press ❚❚PAUSE during playback.
   The unit will now go into PAUSE mode.
2. Press and hold ⏭ (SLOW❙►) during pause mode.
   The unit will enter SLOW mode.
3. Press and hold ⏭ (SLOW❙►) repeatedly to select the required speed: ❙►1/16, ❙►1/8, ❙►1/4, or ❙►1/2.
4. To return to playback, press ▷.

Note
Slow motion playback in reverse is not applicable.

Still Picture and Frame-by-frame Playback

DVD VCD2.0 VCD1.1

1. Press ❚❚PAUSE during playback.
   The unit will now go into PAUSE mode.
2. You can advance the picture frame by frame by pressing ❚❚PAUSE repeatedly on the remote control.
3. To return to playback, press ▷.

Search DVD VCD2.0 VCD1.1

1. Press and hold ⏮ or ⏭ for about two seconds during playback.
   The unit will now go into SEARCH mode.
2. Press and hold ⏮ or ⏭ repeatedly to select the required speed: ◀, ◀◀×2, ◀◀×4, ◀◀×16, ◀◀×100 (backward) or ▶▶×2, ▶▶×4, ▶▶×16, ▶▶×100 (forward).
   With a Video CD, the Search speed changes: ◀◀×2, ◀◀×4, ◀◀×8 (backward) or ▶▶×2, ▶▶×4, ▶▶×8 (forward).
3. To return to playback, press ▷.

Random Karaoke DVD VCD1.1

You can playback selections from a disc in random order.

1. Press RANDOM during playback or in stop mode.
   The unit automatically begins Random Playback and “RANDOM” appears on the TV screen.
2. To return to normal playback, press RANDOM until “RANDOM” disappears on the TV screen.

Tip

By pressing ⏮ or ⏭ during Random playback, the unit selects another title (track) and resumes Random playback.

Note

This function only works with DVD Karaoke discs and video CD without PBC.

Repeat DVD VCD2.0 VCD1.1

CHAPTER | TITLE | TRACK | ALL | Off

DVD Video Discs – Repeat Chapter/Title/Off

1. To repeat the chapter currently playing, press ⮌REPEAT.
   The Repeat Chapter icon appears on the TV screen.
2. To repeat the currently playing title, press ⮌REPEAT a second time.
   The Repeat Title icon appears on the TV screen.
3. To exit Repeat mode, press ⮌REPEAT a third time.
   The Repeat Off icon appears on the TV screen.

Video CDs – Repeat Track/All/Off

1. To repeat the track currently playing, press ⮌REPEAT.
   The Repeat Track icon appears on the TV screen.
2. To repeat the disc currently playing, press ⮌REPEAT a second time.
   The Repeat All icon appears on the TV screen.
3. To exit Repeat mode, press ⮌REPEAT a third time.
   The Repeat Off icon appears on the TV screen.

Note

On a Video CD with PBC, you must set PBC to Off on the setup menu to use the Repeat function. See page 29.

Repeat A-B

DVD VCD2.0 VCD1.1 A | A-B | Off

To repeat a sequence in a title:

1. Press A-B at your chosen starting point.
   A- appears briefly on the TV screen.
2. Press A-B again at your chosen end point.
   A-B appears briefly on the TV screen, and the repeat sequence begins.
3. To cancel the sequence, press A-B.

Operation with DVD and Video CD (Continued)

Time Search DVD 0:00:11

The Time Search function allows you to start playing at any chosen time on the disc.

1. Press DISPLAY during playback. The on-screen display appears on the screen.
   The Time Search box shows the elapsed playing time of the current disc.
2. Within 10 seconds, use ▲+/▼– to select the Time Search icon in the on-screen display.
   The "-:--:--" appears in the Time Search box.
3. Within 10 seconds, use the number buttons to enter the required start time. Enter hours, minutes, and seconds from left to right in the box.
   - If you enter the wrong numbers, press CLEAR to remove the numbers you entered. Then enter the correct numbers.
4. Within 10 seconds, press OK/ENTER to confirm the start time.
   Playback starts from the selected time on the disc. If you enter an invalid time, playback will continue from the current point.

3D Surround DVD VCD2.0 VCD1.1

NORM. | 3D SUR

This unit can produce a 3D Surround effect, which simulates multi-channel audio playback from two conventional stereo speakers, instead of the five or more speakers normally required to listen to multi-channel audio from a home theater system.

1. Press DISPLAY during playback.
2. Use ▲+/▼– to select the sound icon.
3. Use ◀/▶ to select "3D SUR".
   To turn off the 3D Surround effect, select "NORM.".

Notes

- Turn off the other surround effects of the TV and connected audio equipment when using the unit's 3D surround effect.
- Turn off the 3D surround effect when recording the audio source output from this unit.
- If the audio of the disc is recorded with DTS, 96 kHz sampling or in mono, the 3D surround effect cannot be used.

Changing the Audio Track VCD2.0 VCD1.1 STER.

Press AUDIO repeatedly during playback to hear different audio track (Stereo, Left or Right).

Zoom DVD VCD2.0 VCD1.1

The Zoom function allows you to enlarge the video image and to move through the enlarged image.

1. Press ZOOM during playback or still playback to activate the Zoom function.
   - The center of the image is enlarged.
2. Each time you press the button, the magnification increases. There are 6 steps in total of magnification.
3. Press ◀/▶/▲+/▼– to change the location of the zoom.

To return to the normal screen

Press CLEAR.

Notes

- The zoom function may not work for some DVDs.
- The zoom function may not work on multi-angle scenes.

Marker Search DVD VCD2.0 VCD1.1

You can start playback from a memorized point. Up to 9 points can be memorized.
To enter a mark, follow these steps.

1. During disc playback, press MARK when playback reaches the spot that you want to memorize.
   The Marker icon will appear on the TV screen briefly.
2. Repeat step 1 to enter up to 9 Marker points on a disc.

To Recall a Marked Scene

1. During disc playback, press SEARCH.
   The Marker Search menu will appear on the screen.

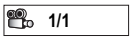
2. Use ◀/▶ to select a Marker that you want to recall.
3. Press OK/ENTER.
   Playback will start from the Marked scene.
4. To remove the Marker Search menu, press SEARCH.

To clear a Marked Scene

1. During disc playback, press SEARCH.
   The Marker Search menu will appear on the screen.
2. Use ◀/▶ to select the Marker that you want to erase.
3. Press CLEAR.
   The Marker will be erased from the Marker Search menu.
4. Repeat steps 2 and 3 to erase additional Marker numbers.
5. To remove the Marker Search menu, press SEARCH.

Special DVD Features

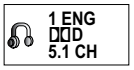
Camera Angle DVD



If the disc contains sequences recorded from different camera angles, the angle icon appears on the display. You can then change the camera angle if you wish.

Press ANGLE repeatedly during playback to select a desired angle.
The number of the current angle appears on the display.

Changing the Audio Language DVD



Press AUDIO repeatedly during playback to hear a different audio language or audio track.

Subtitles DVD

Press SUBTITLE repeatedly during playback to see the different subtitle languages.

Note

If ⃠ appears, the feature is not available on the disc.

Child Lock DVD VCD2.0 VCD1.1 CD DATA-CD

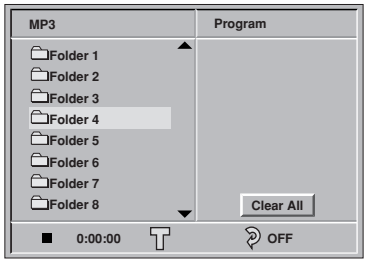
Child Lock function works during disc operation as well as VCR operation. See page 39 for details.

Operation with Audio CD and MP3 Discs

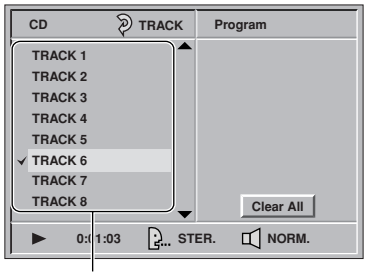
Playing Audio CD and MP3 Discs

This unit can play MP3 formatted recordings on CD-ROM, CD-R, or CD-RW discs.
Before playing MP3 recordings, read the notes on MP3 Recordings on page 49.

1. Insert a disc and close the tray.
   - When loading a CD, the CD menu appears on the TV screen. Go to step 3.
   - When loading an MP3 disc, MP3 and JPEG icon appears on the TV screen. Select MP3 icon using ▲+/▼–, then press OK/ENTER.
2. Press ▲+/▼– to select an MP3 folder, then press OK/ENTER.



3. Press ▲+/▼– to select a track then press ▷ or OK/ENTER.
   - Press TOP MENU to move to the next page or DISC MENU to move to the previous page of the track list.



Track list

During playback, the current track's elapsed playing time will appear on the display.
Playback will stop at the end of the disc or the last track within a folder.

4. To stop playback at any other time, press ■STOP.

Pause CD DATA-CD

1. Press ❚❚PAUSE during playback.
2. To return to playback, press ▷ or ❚❚PAUSE.

Moving to another Track CD DATA-CD

- Press ⏮ or ⏭ briefly during playback to go to the next track or to return to the beginning of the current track. Press ⏮ twice briefly to step back to the previous track.
  Or select the desired track using ▲+/▼–, then press OK/ENTER.
- To go directly to any track on an audio CD, enter the track number using the numeric buttons (0–9) during playback.

Repeat Track/All/Off CD DATA-CD

1. To repeat the one track that is playing, press ↻REPEAT.
   The Repeat Track icon appears on the menu screen.
2. To repeat all tracks on a currently playing disc, press ↻REPEAT a second time.
   The Repeat All icon appears on the menu screen.
3. To cancel repeat, press ↻REPEAT a third time.
   Repeat mode is canceled and the Off icon is displayed.

Search CD DATA-CD

1. Press and hold ⏮ or ⏭ for about two seconds during playback.
   The unit will now go into SEARCH mode.
2. Press and hold ⏮ or ⏭ repeatedly to select the required speed: ◀◀×2, ◀◀×4, ◀◀×8 (backward) or ▶▶×2, ▶▶×4, ▶▶×8 (forward).
3. To return to playback, press ▷.

Random CD DATA-CD

You can playback in random order within a disc or folder.

1. Press RANDOM during playback or in stop mode.
   The unit automatically begins Random Playback and "RAND." appears on the menu screen.
2. To return to normal playback, press RANDOM.

Tip

By pressing ⏮ or ⏭ during Random playback, the unit selects another track and resumes Random playback.

Repeat A-B CD

To repeat a sequence:

1. During disc playback, press A-B at your chosen starting point.
   A- appears on the menu screen.
2. Press A-B again at your chosen end point.
   A- B appears on the menu screen, and the sequence begins to play repeatedly.
3. To exit the sequence and return to normal play, press A-B again.

Changing the audio track CD

Press AUDIO repeatedly during playback to hear different audio track (Stereo, Left or Right).

3D Surround CD

The 3D Surround effect works as well as DVDs and video CDs (See page 46).

1. Press DISPLAY during playback.
2. Press ▶ to select the sound icon.
   The sound icon is highlighted in orange.
3. Press ▲+/▼– to select "3D SUR".

To turn off the 3D surround effect

Select "NORM." in step 3 above.

Notes on MP3 Discs

About MP3

- An MP3 file is audio data compressed by using MPEG1, the audio layer-3 file-coding scheme. We call files that have the .mp3 file extension MP3 files.
- The unit cannot read an MP3 file that has a file extension other than .mp3.
- The unit cannot read a fake MP3 file that has a file extension .mp3.

MP3 disc compatibility with this unit is limited as follows:

1. Sampling Frequency/only at 44.1kHz
2. Bit rate/only 128kbps
3. CD-R/RW physical format should be ISO 9660
4. The unit cannot play MP3 files recorded using a packet writing utility.
5. File names should be named using 8 letters or less and must incorporate the .mp3 extension e.g. "********.MP3".
6. Characters other than uppercase letters ("A" to "Z"), numerals ("0" to "9") and underscore ("_") may not be displayed, or may be displayed as different characters.
7. Total number of files including JPEG files and folders on the disc should be less than 648.
8. Use 74-minute CD-R/RW discs (650M), do not use 80-minute CD-R/RW (700M) software.

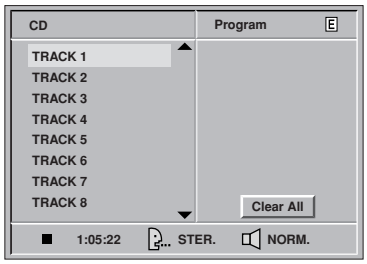
This unit requires discs/recordings to meet certain technical standards in order to achieve optimal playback quality. Pre-recorded DVDs are automatically set to these standards. There are many different types of recordable disc formats (including CD-R/RW containing MP3 files).

Programmed Playback

Programmed Playback VCD1.1 CD DATA-CD

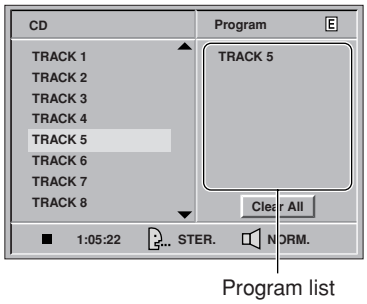
You can select up to 30 tracks and play them in the programmed order.

1 Press PROGRAM in stop mode.
The "E" mark appears on the upper right of the program list.



2 Press ▲+/▼– to select a track.
- To move to the next page, press TOP MENU.
- To move to the previous page, press DISC MENU.

3 Press OK/ENTER.
The selected track is entered on the program list.

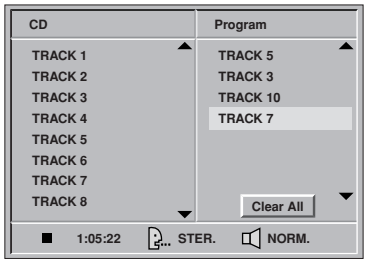


Program list

4 Repeat steps 2 and 3 to enter additional tracks on the program list.

5 Press PROGRAM to exit the program edit mode.
The "E" mark disappears from the menu.

6 Press ▶.
The last entered track on the program list is highlighted.



7 Press ▲+/▼– to select a track to start playback on the program list.
- To move to the next page, press TOP MENU.
- To move to the previous page, press DISC MENU.

8 Press ▷ or OK/ENTER.
- Playback starts from the selected track in the programmed order.
- Playback stops after the last programmed track on the program list has been played.

To return to normal playback

VCD1.1

Press PROGRAM.

CD DATA-CD

Press ◀ and ▲+/▼– to select a track on the track list, then press ▷ or OK/ENTER to start playback.

To repeat programmed playback

Press ↻ REPEAT repeatedly.
Each time you press the button, repeat play mode changes as shown on page 45 or 48. If you select "ALL", all the tracks on the program list will be played repeatedly in the programmed order.

To delete a track from the program list

1 Press PROGRAM to enter program edit mode.

2 Press ▶.

3 Press ▲+/▼– to select the track you want to delete, then press CLEAR.

To clear the entire program

1 Follow steps 1 and 2 above.

2 Press ▲+/▼– repeatedly or press ▶ to select "Clear All", then press OK/ENTER.

Note

The program is also cleared when you open the disc tray.

Operation with DATA-CD containing JPEG files

Displaying JPEGs DATA-CD

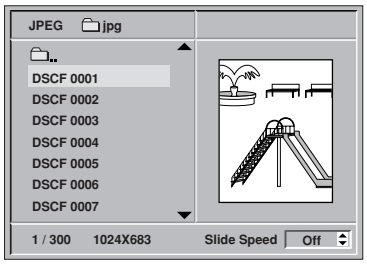
- Use discs that have been recorded in compliance with the ISO 9660 CD-ROM file system.
- This player is compatible with CD-R/CD-RW/CD-ROMs containing JPEG files (some recording methods may not allow discs to be played).
- Baseline JPEG or EXIF*1 compliant still image files up to 7 mega-pixels are supported (with a maximum vertical and horizontal resolution of 5760 × 3840 pixels).
- Still image JPEG files identified by the file extension .jpg or .JPG can be displayed.
- Total number of files including MP3 files and folders on the disc should be less than 648.
- Images of large files may take more time loading.

*1 EXIF 2.1 is the file format used by digital still cameras, JEIDA-49-1998 Japan Electronics and Information Technology Industries Association (JEITA)

Playback of JPEG images DATA-CD

Individual images

1. Insert a disc with JPEG images.
2. MP3 and JPEG icon appears on the TV screen. Select JPEG icon using ▲+/▼–, then press OK/ENTER.
   - If JPEG folders are displayed, press ▲+/▼– to select a JPEG folder, then press OK/ENTER.
3. Press ▲+/▼– to select a JPEG file.
   - To move to the next page, press TOP MENU.
   - To move to the previous page, press DISC MENU.



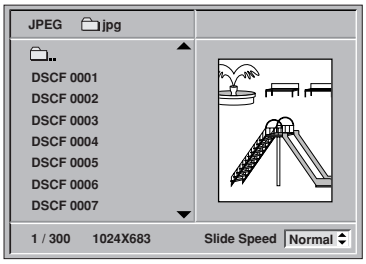
A preview of each file selected from the list of the left is displayed on the right and directory information is displayed at the bottom of the screen.

4. Press ▷ or OK/ENTER to display a selected file at full size.
5. Press ■STOP or ↶RETURN to return to the menu.

Slide Show

JPEG files can be played back sequentially.

1. Follow step 1 and 2 of the left.
2. Press ▶ to move the cursor to the Slide Speed section.
3. Press ▲+/▼– repeatedly to select the playback speed. Each time you press the buttons, the speed changes as follows.
   Fast ⟷ Normal ⟷ Slow ⟷ Off
   • If you select Off, Slide Show does not begin.



4. Press ◀ and ▲+/▼– to select a file to start playback.
   - To move to the next page, press TOP MENU.
   - To move to the previous page, press DISC MENU.
5. Press ▷ or OK/ENTER.
   - Playback starts from the selected file in order.
   - Playback stops after the last file within the folder has been played.

To return to the menu during playback
Press ■STOP or ↶RETURN.

Troubleshooting

Check the following guide for the possible cause of a problem before contacting service.

Symptom	Cause	Correction
No power.	• The AC power cord is disconnected.	• Plug the power cord into the wall outlet securely.
The power is on, but the unit does not work.	• No disc is inserted. • No tape is inserted.	• Insert a disc or tape. (Check that the disc or tape indicator in the display window is lit.)
No picture.	• The TV is not set to receive the unit's signal output.	• Select the appropriate video input mode on the TV so the picture from the unit appears on the TV screen.
	• TV/Video mode for the unit is set to TV.	• Press the TV/VIDEO button on the remote control repeatedly to choose VCR mode. TV indicator light disappears in the display window.
	• The connected TV power is turned off.	• Turn on the TV.
No sound.	• The equipment connected with the audio cable is not set to receive the unit's signal output.	• Select the correct input mode of the audio receiver so you can listen to the sound from the unit.
	• The audio cables are not connected securely.	• Connect the audio cable securely.
	• The power of the equipment connected with the audio cable is turned off.	• Turn on the equipment connected with the audio cable.
	• The audio output options setting is wrong.	• Set the audio output options setting to the correct position (page 28), then turn on the unit again by pressing I/⏻.
The playback picture is poor.	• The disc is dirty.	• Clean the disc.
	• Tape heads are dirty.	• Clean video heads.
	• Tape is a rental or was recorded on another VCR.	• Use CH/TRACKING ▲+/▼– for manual tracking adjustment while tape is playing.
The unit does not start playback.	• No disc is inserted. • No tape is inserted.	• Insert a disc or tape. (Check that the disc or tape indicator in the display window is lit.)
	• An unplayable disc is inserted.	• Insert a playable disc. (Check the disc type and Regional code.)
	• The disc is placed upside down.	• Place the disc with the playback side down.
	• The disc is not placed within the guide.	• Place the disc on the disc tray correctly inside the guide.
	• The disc is dirty.	• Clean the disc.
	• The Rating level is set.	• Cancel the Rating function or change the rating level.
The remote control does not work properly.	• The remote control is not pointed at the remote sensor of the unit.	• Point the remote control at the remote sensor of the unit.
	• The remote control is too far from the unit.	• Operate the remote control within 7 m.
	• There is an obstacle in the path of the remote control and the unit.	• Remove the obstacle.
	• The batteries in the remote control are exhausted.	• Replace the batteries with new ones.
	• This remote control has same buttons between VCR and DVD (ex. ▷ (PLAY)).	• When using a VCR, first press the VIDEO button. When using a DVD, first press the DVD button.

Troubleshooting (Continued)

Symptom	Cause	Correction
Camcorder image is not shown.	• Camcorder is off.	• Turn camcorder on and operate properly.
Camcorder image via A/V input to the unit is not shown on TV screen.	• Unit INPUT SELECT is not set to AV3.	• Press INPUT SELECT to select input channel AV3.
Timer recording is not possible.	• Clock in the unit is not set to correct time.	• Set clock to correct time. See “Setting the Clock Manually” on page 23.
	• Timer has been programmed incorrectly.	• Reprogram Timer. See page 34 or 36.
⏲ indicator light appears while the unit is turned on.	• The unit is in Timer Recording mode.	• This is the normal indication that the unit is in TIMER mode.

Moisture Condensation	
Moisture condensation can occur:	In locations where moisture condensation may occur:
• When the unit is moved from a cold place to a warm place. • Under extremely humid conditions.	• Keep the unit plugged into an AC outlet with POWER On. This will help prevent condensation. • When condensation has occurred, wait a few hours for the unit to dry before using it.

If a malfunction occurs

Turn off the power and disconnect the AC power cord from the AC outlet. Then reconnect the AC power cord after leaving the unit for more than 10 seconds.

Country Code List

Enter the appropriate code number for the initial setting “Country Code” (See page 31).

Code	Country
AD	Andorra
AE	United Arab Emirates
AF	Afghanistan
AG	Antigua and Barbuda
AI	Anguilla
AL	Albania
AM	Armenia
AN	Netherlands Antilles
AO	Angola
AQ	Antarctica
AR	Argentina
AS	American Samoa
AT	Austria
AU	Australia
AW	Aruba
AZ	Azerbaidjan
BA	Bosnia-Herzegovina
BB	Barbados
BD	Bangladesh
BE	Belgium
BF	Burkina Faso
BG	Bulgaria
BH	Bahrain
BI	Burundi
BJ	Benin
BM	Bermuda
BN	Brunei Darussalam
BO	Bolivia
BR	Brazil
BS	Bahamas
BT	Bhutan
BV	Bouvet Island
BW	Botswana
BY	Belarus
BZ	Belize
CA	Canada

Code	Country
CC	Cocos (Keeling) Islands
CF	Central African Republic
CG	Congo
CH	Switzerland
CI	Ivory Coast
CK	Cook Islands
CL	Chile
CM	Cameroon
CN	China
CO	Colombia
CR	Costa Rica
CS	Former Czechoslovakia
CU	Cuba
CV	Cape Verde
CX	Christmas Island
CY	Cyprus
CZ	Czech Republic
DE	Germany
DJ	Djibouti
DK	Denmark
DM	Dominica
DZ	Algeria
EC	Ecuador
EE	Estonia
EG	Egypt
EH	Western Sahara
ER	Eritrea
ES	Spain
ET	Ethiopia
FI	Finland
FJ	Fiji
FK	Falkland Islands
FM	Micronesia
FO	Feroe Islands
FR	France
FX	France (European Territory)

Code	Country
GA	Gabon
GB	Great Britain
GD	Grenada
GE	Georgia
GF	French Guyana
GH	Ghana
GI	Gibraltar
GL	Greenland
GM	Gambia
GN	Guinea
GP	Guadeloupe (French)
GQ	Equatorial Guinea
GR	Greece
GS	S. Georgia & S. Sandwich Isles.
GT	Guatemala
GU	Guam (USA)
GW	Guinea Bissau
GY	Guyana
HK	Hong Kong
HM	Heard and McDonald Islands
HN	Honduras
HR	Croatia
HT	Haiti
HU	Hungary
ID	Indonesia
IE	Ireland
IL	Israel
IN	India
IO	British Indian Ocean Territory
IQ	Iraq
IR	Iran
IS	Iceland
IT	Italy
JM	Jamaica
JO	Jordan
JP	Japan

Code	Country
KE	Kenya
KG	Kyrgyzstan
KH	Cambodia
KI	Kiribati
KM	Comoros
KN	Saint Kitts & Nevis
KP	North Korea
KR	South Korea
KW	Kuwait
KY	Cayman Islands
KZ	Kazakhstan
LA	Laos
LB	Lebanon
LC	Saint Lucia
LI	Liechtenstein
LK	Sri Lanka
LR	Liberia
LS	Lesotho
LT	Lithuania
LU	Luxembourg
LV	Latvia
LY	Libya
MA	Morocco
MC	Monaco
MD	Moldavia
MG	Madagascar
MH	Marshall Islands
MK	Macedonia
ML	Mali
MM	Myanmar
MN	Mongolia
MO	Macau
MP	Northern Mariana Islands
MQ	Martinique (French)
MR	Mauritania
MS	Montserrat

Country Code List (Continued)

Code	Country	Code	Country	Code	Country
MT	Malta	QA	Qatar	TN	Tunisia
MU	Mauritius	RE	Reunion (French)	TO	Tonga
MV	Maldives	RO	Romania	TP	East Timor
MW	Malawi	RU	Russian Federation	TR	Turkey
MX	Mexico	RW	Rwanda	TT	Trinidad and Tobago
MY	Malaysia	SA	Saudi Arabia	TV	Tuvalu
MZ	Mozambique	SB	Solomon Islands	TW	Taiwan
NA	Namibia	SC	Seychelles	TZ	Tanzania
NC	New Caledonia (French)	SD	Sudan	UA	Ukraine
NE	Niger	SE	Sweden	UG	Uganda
NF	Norfolk Island	SG	Singapore	UK	United Kingdom
NG	Nigeria	SH	Saint Helena	UM	USA Minor Outlying Islands
NI	Nicaragua	SI	Slovenia	US	United States
NL	Netherlands	SJ	Svalbard and Jan Mayen Islands	UY	Uruguay
NO	Norway	SK	Slovak Republic	UZ	Uzbekistan
NP	Nepal	SL	Sierra Leone	VA	Vatican City State
NR	Nauru	SM	San Marino	VC	Saint Vincent & Grenadines
NU	Niue	SN	Senegal	VE	Venezuela
NZ	New Zealand	SO	Somalia	VG	Virgin Islands (British)
OM	Oman	SR	Suriname	VI	Virgin Islands (USA)
PA	Panama	ST	Saint Tome and Principe	VN	Vietnam
PE	Peru	SU	Former USSR	VU	Vanuatu
PF	Polynesia (French)	SV	El Salvador	WF	Wallis and Futuna Islands
PG	Papua New Guinea	SY	Syria	WS	Samoa
PH	Philippines	SZ	Swaziland	YE	Yemen
PK	Pakistan	TC	Turks and Caicos Islands	YT	Mayotte
PL	Poland	TD	Chad	YU	Yugoslavia
PM	Saint Pierre and Miquelon	TF	French Southern Territories	ZA	South Africa
PN	Pitcairn Island	TG	Togo	ZM	Zambia
PR	Puerto Rico	TH	Thailand	ZR	Zaire
PT	Portugal	TJ	Tadjikistan	ZW	Zimbabwe
PW	Palau	TK	Tokelau		
PY	Paraguay	TM	Turkmenistan		

Language Code List

Enter the appropriate code number for the initial settings “Disc Audio”, “Disc Subtitle” and/or “Disc Menu” (See page 27).

Code	Language	Code	Language	Code	Language	Code	Language
6566	Abkhazian	7074	Fiji	7678	Lingala	8373	Singhalese
6565	Afar	7073	Finnish	7684	Lithuanian	8375	Slovak
6570	Afrikaans	7082	French	7775	Macedonian	8376	Slovenian
8381	Albanian	7089	Frisian	7771	Malagasy	8379	Somali
6577	Amharic	7176	Galician	7783	Malay	6983	Spanish
6582	Arabic	7565	Georgian	7776	Malayalam	8385	Sudanese
7289	Armenian	6869	German	7784	Maltese	8387	Swahili
6583	Assamese	6976	Greek	7773	Maori	8386	Swedish
6588	Aymara	7576	Greenlandic	7782	Marathi	8476	Tagalog
6590	Azerbaijani	7178	Guarani	7779	Moldavian	8471	Tajik
6665	Bashkir	7185	Gujarati	7778	Mongolian	8465	Tamil
6985	Basque	7265	Hausa	7865	Nauru	8484	Tatar
6678	Bengali; Bangla	7387	Hebrew	7869	Nepali	8469	Telugu
6890	Bhutani	7273	Hindi	7879	Norwegian	8472	Thai
6672	Bihari	7285	Hungarian	7982	Oriya	6679	Tibetan
6682	Breton	7383	Icelandic	8065	Panjabi	8473	Tigrinya
6671	Bulgarian	7378	Indonesian	8083	Pashto, Pushto	8479	Tonga
7789	Burmese	7365	Interlingua	7065	Persian	8482	Turkish
6669	Byelorussian	7165	Irish	8076	Polish	8475	Turkmen
7577	Cambodian	7384	Italian	8084	Portuguese	8487	Twi
6765	Catalan	7465	Japanese	8185	Quechua	8575	Ukrainian
9072	Chinese	7487	Javanese	8277	Rhaeto-Romance	8582	Urdu
6779	Corsican	7578	Kannada	8279	Romanian	8590	Uzbek
7282	Croatian	7583	Kashmiri	8285	Russian	8673	Vietnamese
6783	Czech	7575	Kazakh	8377	Samoan	8679	Volapük
6865	Danish	7589	Kirghiz	8365	Sanskrit	6789	Welsh
7876	Dutch	7579	Korean	7168	Scots Gaelic	8779	Wolof
6978	English	7585	Kurdish	8382	Serbian	8872	Xhosa
6979	Esperanto	7679	Laothian	8372	Serbo-Croatian	7473	Yiddish
6984	Estonian	7665	Latin	8378	Shona	8979	Yoruba
7079	Faeroese	7686	Latvian, Lettish	8368	Sindhi	9085	Zulu

Specifications

General

Power requirements
AC 200–240 V, 50 Hz
Power consumption
23 W
Dimensions (approx.)
430 × 97.5 × 293 mm (w × h × d)
Mass (approx.)
5.1 kg
Operating temperature
5˚C to 40˚C
Operating humidity
5 % to 90 %

Inputs

AERIAL
Antenna or CATV input, 75 ohms
EURO AV2 SCART connector × 1
AV3 IN VIDEO RCA jack × 1
AV3 IN AUDIO (L/R) RCA jack × 1

Outputs

EURO AV1AUDIO/VIDEO SCART connector × 1
Audio output
Digital output: 0.5 Vp-p (75 ohms), RCA jack × 1
Analog output: 2.0 Vrms (1 kHz, 0 dB, 330 ohms), RCA jacks (L/R) × 2
RF.OUT × 1

VCR Specifications

Video recording system
Rotary 2 head helical scanning system
Video head
Double azimuth 4 heads
Tuner system
Frequency synthesized tuner
TV system
B/G
Video signal system
PAL/MESECAM color signal, 625 lines, 50 fields
Usable cassettes
VHS video cassettes
Recording/playback time
PAL/MESECAM
SP: 5 hours max. with E-300 tape
LP: 10 hours max. with E-300 tape
NTSC (Playback only)
SP: 3 hours 30 minutes max. with T-210 tape
LP: 7 hours max. with T-210 tape
EP: 10 hours 30 minutes max. with T-210 tape
Tape speed
PAL/MESECAM
SP: 23.39 mm/sec
LP: 11.69 mm/sec
NTSC (Playback only)
SP: 33.35 mm/sec
LP: 16.67 mm/sec
EP: 11.12 mm/sec
Rewind time
Approx. 1 min. with E-180 tape
Channel coverage
VHF: E02–E12
UHF: E21–E69
CATV: S01–S41
RF output: 66 dBµ
Video input
1.0 Vp-p, 75 ohm, unbalanced
Video output
1.0 Vp-p, 75 ohm, unbalanced
Horizontal resolution
240 lines (at SP)
Video S/N
43 dB (at SP)
Audio track
3 tracks (Hi-Fi sound 2 tracks, Normal sound 1 track)
Audio input
–6 dBs, 47 K ohm
Audio output
–6 dBs, less than 4.7 K ohm
Audio frequency response
normal: 100 Hz–10 K Hz (at SP)
Hi-Fi: 20 Hz–20 K Hz (at SP)
Audio S/N
normal: more than 43 dB (at SP)
Hi-Fi: more tha 70 dB (at SP)
Hi-Fi dynamic range
more than 85 dB (at SP)

DVD Specifications

Laser system
Semiconductor laser, wavelength 650/780 nm
Supported discs
DVD video discs: 12 cm (single-sided single layer, single-sided double layer, double-sided double layer), 8 cm (single-sided single layer, single-sided double layer, double-sided double layer)
Compact discs (CD-DA, MP3): 12 cm and 8 cm
Frequency response
DVD (PCM 96 kHz): 8 Hz to 44 kHz
DVD (PCM 48 kHz): 8 Hz to 22 kHz
CD: 8 Hz to 20 kHz
Signal-to-noise ratio
More than 90 dB
Harmonic distortion
Less than 0.008%
Dynamic range
More than 90 dB (DVD/CD)

Accessory

Antenna cord × 1
Remote control × 1
R03 (size AAA) batteries × 2

• Design and specifications are subject to change without notice.

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